FOUNDED IN 1856

RAILWAY AGE

THE STANDARD RAILROAD W

NOVEMBER 10, 1952

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MORE THAN
143,527
CARS EQUIPPED

with WINE

Cast Steel
HOPPER
FRAMES

...ANY ONE OF WHICH WILL CARRY GRAIN WITHOUT LOSS OF LADING!

THE WINE RAILWAY APPLIANCE CO. TOLEDO 9, OHIO

THE RAILROADS WERE THE FIRST REGULATED INDUSTRY TODAY, THEY ARE THE MOST COMPLETELY REGULATED
BUT WE ARE NOT ALONE OTHER INDUSTRIES ARE ALREADY GOING OUR WAY!
EASTERN RAILROADS

RAILROADS' MEET THE CANDIDATE

TAKING a leaf from the current trend, your railroads now have their own candidate out on a real "whistle stop" campaign

There are, in fact, two candidates, both carrying identical messages to the American people — the 100,000th freight car built for the Eastern railroads since the end of World War II, which will visit the terminals of 10 major cities in the area served by the 37 railroad members of the Eastern Railroad President's Conference, and the 100,001st postwar car will tour through 77 rural communities in the 17 Northeastern states. Both tours end in May 1953.

Although the two freight cars represent still another milestone in railroad efficiency and progress, they will serve primarily as a symbol of the need for modernized government regulation of the nation's rail system. Interior displays will stress the fact that the railroads have kept pace with economic and technological progress, while the mass of railroad laws now in existence is 65 years behind the times.

So once more, when there's a tough job to be done, your railroads turn to that dependable workhorse of the rails, the American freight car, to deliver the goods.

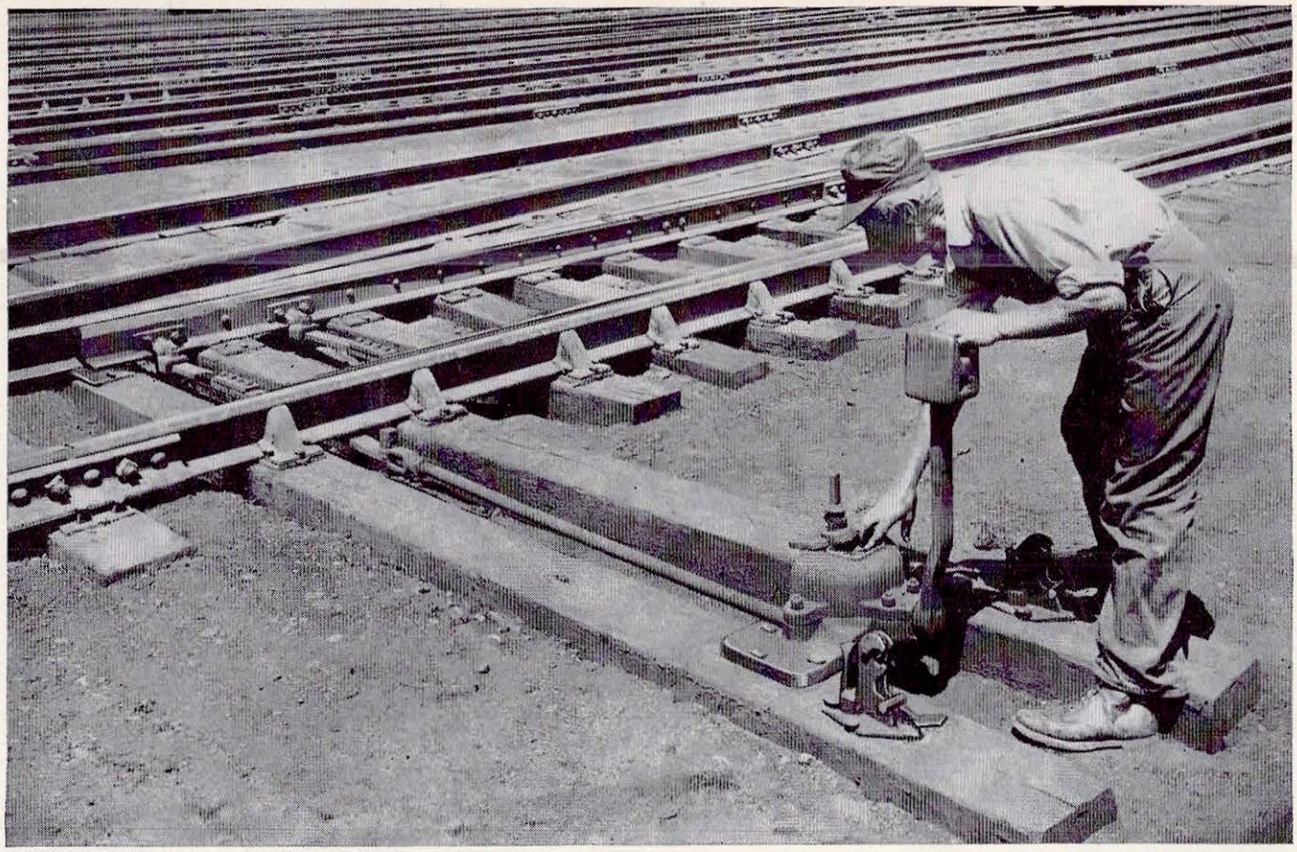
Because they are typical of the overwhelming majority of the railroads' great fleet of new postwar freight cars, both of these cars are making their tour on ultra-modern Unit Trucks equipped with hangerless brake beams.

UNIT TRUCK

We deeply appreciate the many fine comments we have received from our railroad friends on our recent advertisement in behalf of the Eastern Railroad President's Conference on the occasion of the "whistle-stop" tour of the 100,000th freight car built for the Eastern railroads since the end of World War II. We sincerely believe that what helps the railroads, helps us, and we'll continue to raise our small voice whenever we can, to get a square deal for the railroads.

UNIT TRUCK CORPORATION

NEW YORK



Model 51 New Century Switch Stand is adjusted without disconnecting the rod.

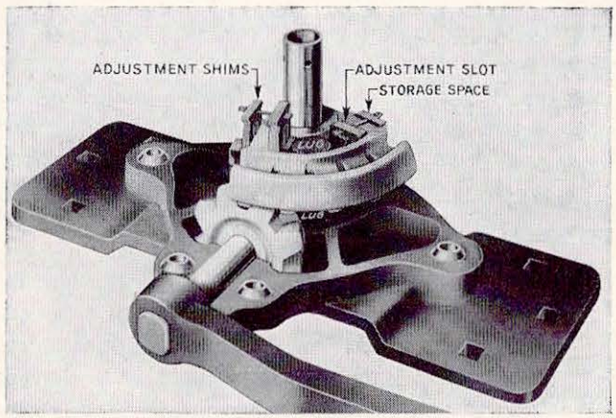
Switch Stand PLUS

Sure, the New Century does a fast, easy job of throwing switches. That's its primary purpose, of course. But this fine, sturdy switch stand (known to railroad men for over 50 years) does something more: it greatly speeds and simplifies switch point adjustment.

The Model 51* is equipped with a shim device that is easily reached by pushing aside an outer cover. Adding a shim or two increases the throw of the switch points. Removing shims decreases the throw.

There is nothing complicated, *nothing to take apart.* Adjustment is only a matter of minutes. And spare shims cannot be lost, for there is plenty of storage space within the stand.

Use the New Century with heavy rail—60-lb and up—in main lines, branch lines, yards. It's a regular workhorse, built to last for years. We'll gladly furnish full details on request—or arrange for a demonstration at any time you say.



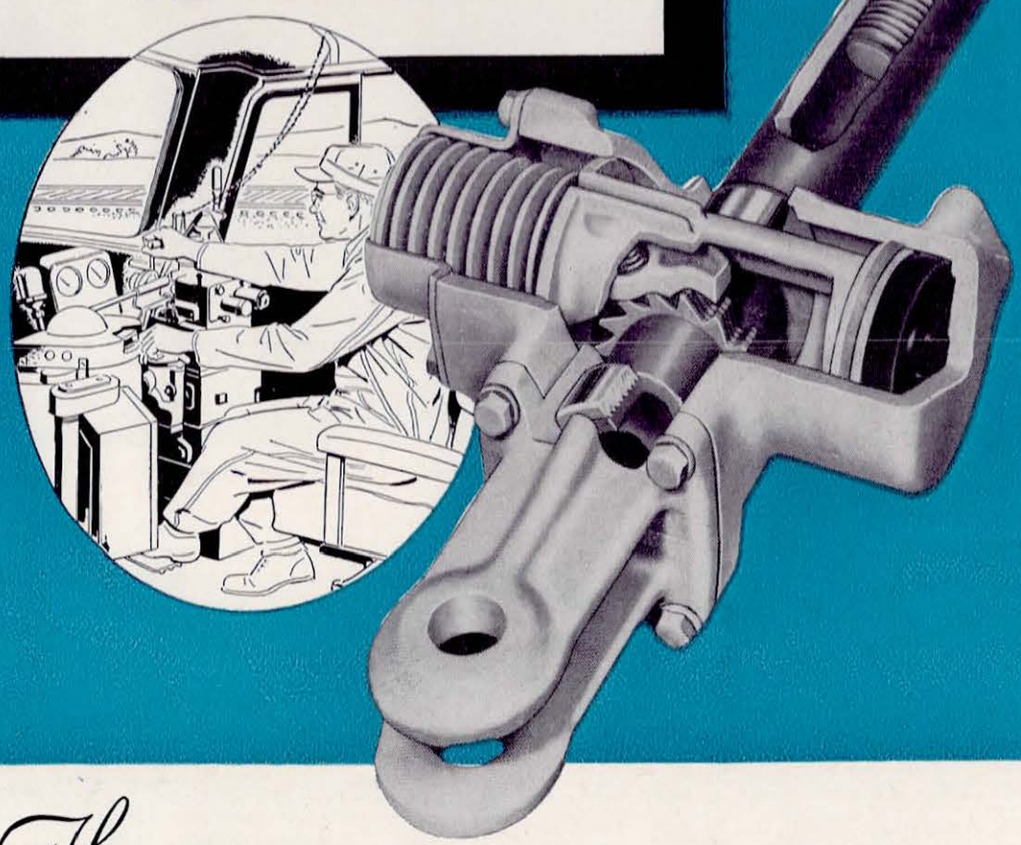
*Also available is the Model 50, a nonadjustable type. Both the 50 and the 51 can be furnished in a low design and an intermediate design.

BETHLEHEM STEEL

BETHLEHEM STEEL COMPANY
BETHLEHEM, PA.

On the Pacific Coast Bethlehem products are sold by Bethlehem Pacific Coast Steel Corporation. *Export Distributor:* Bethlehem Steel Export Corporation

Checks for slack on every brake application



The Westinghouse Air Brake Type D *Automatic Pneumatic* Slack Adjuster FOR FREIGHT CARS

YOU don't have to touch your brake rigging from the installation of one set of shoes to the next when your freight cars are equipped with the Westinghouse Air Brake Type D Automatic Pneumatic Slack Adjuster.

The Westinghouse Slack Adjuster saves time and it saves money when it comes to making up trains. It doesn't take as long to get a train ready for the road, and you can be *sure* the brakes are properly adjusted. In time savings *alone,* the Westinghouse Slack Adjuster will pay for itself over and over again, and lower your operating costs.

As soon as the brake cylinder piston exceeds its normal travel, due to brake shoe wear, the Type D automatically adjusts the rigging to compensate for shoe wear. This assures uniform piston travel—therefore uniform braking pressure, and it's attained *automatically.* Manual adjustments are eliminated.

Westinghouse Air Brake Company

AIR BRAKE DIVISION

WILMERDING, PA.

Vol. 133, No. 19 November 10, 1952

RAILWAY AGE

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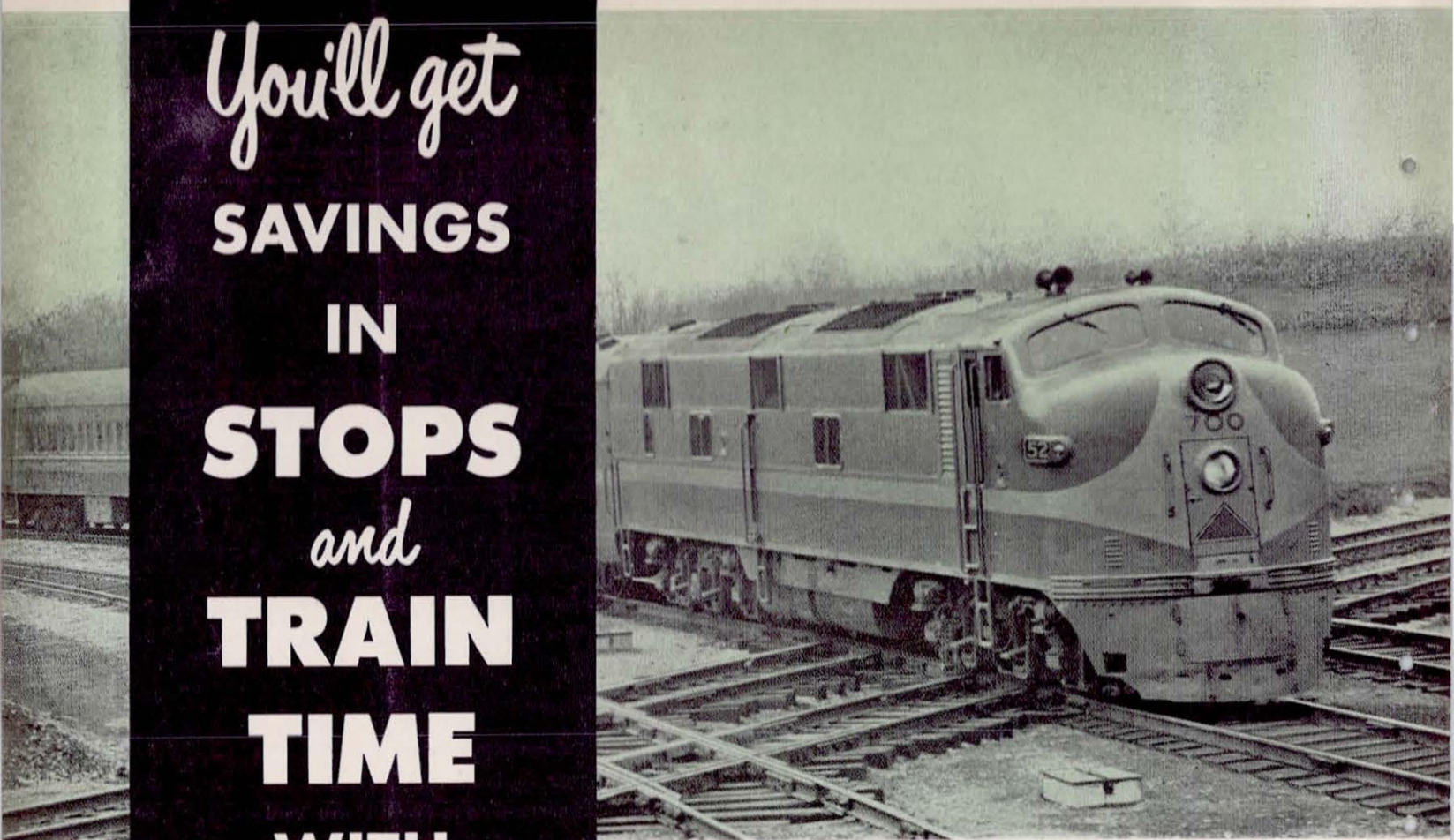
You'll get SAVINGS IN STOPS and TRAIN TIME WITH "UNION" INTERLOCKING



FOR EXAMPLE...3 Railroads involved at one "Union" Interlocking save an estimated $112,730.00 annually as follows:

1—Freight Train Time Saved.	$73,730.00
2—Train Stops Eliminated . .	27,500.00
3—Miscellaneous	11,500.00
GROSS SAVINGS. . . .	$112,730.00
NET SAVINGS	$104,998.00

Notes from the Records*

RAILROAD A Average Trains Daily—53 • Train Time Saved Daily—404 minutes • (Passenger—54 minutes—Freight—350 minutes)

RAILROAD B Average Trains Daily—50 (Including 20 switching movements) • Train Time Saved Daily—626 minutes • (Passenger—36 minutes—Freight—390 minutes—Switching Movements—200 minutes)

RAILROAD C Average Trains Daily—31 • Train Time Saved Daily—282 minutes • (Passenger—12 minutes—Freight—270 minutes)

**Additional factual data will be supplied on request.*

Such interlockings start making savings from the day they are installed. There should be points on your railroad where "UNION" can help. We welcome opportunities to be of assistance.

UNION SWITCH & SIGNAL

DIVISION OF WESTINGHOUSE AIR BRAKE COMPANY

SWISSVALE PENNSYLVANIA

NEW YORK CHICAGO ST. LOUIS SAN FRANCISCO

WEEK AT A GLANCE

CURRENT RAILWAY STATISTICS

Operating revenues, nine months
1952 ..... $7,753,138,898
1951 7,620,559,529

Operating expenses, nine months
1952 ..... $5,972,924,562
1951 6,003,270,343

Taxes, nine months
1952 ..... $ 912,274,900
1951 859,620,840

Net railway operating income, nine months
1952 ..... $ 732,335,415
1951 606,459,584

Net income, estimated, nine months
1952 ..... $ 502,000,000
1951 391,000,000

Average price railroad stocks
November 3, 1952 ..... 62.49
November 5, 1951 ..... 53.19

Car loadings, revenue freight
43 weeks, 1952 31,310,966
43 weeks, 1951 33,822,587

Average daily freight car surplus
November 1, 1952 11,083
November 3, 1951 2,623

Average daily freight car shortage
November 1, 1952 11,204
November 3, 1951 14,055

Freight cars delivered
September 1952 3,762
September 1951 8,533

Freight cars on order
October 1, 1952 95,377
October 1, 1951 140,135

Freight cars held for repairs
October 1, 1952 104,283
October 1, 1951 97,176

Average number of railroad employees
Mid-September 1952 1,233,638
Mid-September 1951 1,286,658

In This Issue . . .

TWO MORE NEW YARDS—both on the Southern—have gone into service within the past few days. The larger of the two, Ernest Norris yard at Birmingham, Ala., a $10-million project, is the topic of the first three feature articles in this issue (pages 53, 54 and 60); while the other yard, at New Orleans, named for the Southern's traffic vice-president, E. R. Oliver, is the subject of a leading news article (page 12).

ONE OF THE BIGGEST SINGLE ORDERS for passenger-train cars to be reported in many years has been placed by the Canadian National. It includes 161 coaches, 84 sleepers and 55 other cars—dining, parlor, buffet, etc. The coaches will be built by Canadian Car & Foundry; all the others by Pullman-Standard.

NEXT YEAR, railroad crosstie renewals are likely to show a "moderate to substantial upturn," according to the consensus of opinion of several speakers who addressed the recent New Orleans convention of the Railway Tie Association. Our own engineering editor, who was one of the speakers, went so far as to predict that, assuming continued good business, "tie renewals will continue to show an uptrend for a number of years." His and other opinions expressed at the meeting are covered in the report of it which starts on page 68.

WHAT LOOKS LIKE SOMETHING NEW in railroad jobs is the creation by the New York Central of the position of general passenger agent—suburban. First incumbent of that position, Warren H. White, "will devote his entire time to the commuter phases of railroad transportation." Reasons behind creation of the new position, and some of its duties, are further outlined in the Railway Officers—Traffic news columns.

In Washington . . .

A BREAKDOWN of the much discussed passenger-service deficit has been issued by the I.C.C.'s Bureau of Accounts and Cost Finding. On each of two different bases, the bureau assigns roughly two-thirds of the deficit to actual transportation of passengers; the other one-third to head-end traffic, principally express.

REVENUES AND EARNINGS continued during September to show the same general trends that have characterized them now for

WEEK AT A GLANCE

the past few months—slightly higher gross revenues, obviously reflecting the Ex Parte 175 increases, and slightly lower expenses, producing between them some reasonably satisfactory increases in N.R.O.I. and in net income. Detailed figures for September and for nine months of 1951 and 1952 are given on page 13.

. . . And Elsewhere

THE SPEED OF L.C.L.: "In the first 15 days of August, a noted midwestern store received 41 less-than-carload shipments from an average distance of 722 miles, at an average delivery time of 13 days, which figures out to 55.6 miles per day, or 2.3 m.p.h." The railroad man who supplied this information observes that it refutes the allegation sometimes made to the effect that l.c.l. service corresponds in speed to a man afoot. The fact is, on the contrary, that "you can walk faster."

IRON ORE MINING in parts of Michigan's Upper Peninsula has a bright future, according to a recent statement by Philip D. Block, Jr., vice-president of Inland Steel Company. His company, Mr. Block said, is "planning to continue the use of a good tonnage of Menominee ores," bearing in mind the fact that "although foreign ores, produced from open pits, can be mined more economically . . . these foreign ores must be transported over very long distances at extremely high costs."

WANT TO GO TO TURKEY? Joseph L. White, transportation consultant, with offices at 74 Trinity place, New York, who recently spent four years in that country as consultant to the Turkish State Railways, tells us they are seeking the services of another consultant. Preference is for an active or retired man, who can advise on expediting train and car movement. Actual experience as a dispatcher or transportation officer, and rank of general superintendent or higher, seems to be essential. Further details may be obtained from Mr. White.

A NEW INTERCITY BUS, just announced by General Motors Truck & Coach Division, features a radically new springing system called "air suspension ride." Conventional leaf springs are eliminated entirely in favor of eight heavy, flexible air bellows which literally make the coach "ride on air." The new suspension system is said to be so sensitive to high frequency vibrations that even the hum of tires is insulated from the body proper. Not only are passengers expected to find a softer, more comfortable ride, but operators may look for economies in body maintenance because of reduced structural fatigue.

A 25 PER CENT INCREASE in transcontinental air coach service has been announced by United Air Lines, to start November 1, when daily scheduled tourist (U.A.L.'s term for air coach service) mileage was to be increased from 16,700 to 20,600. The new service links New York, Chicago, Omaha and Denver with Salt Lake City and the Pacific North West. United is also surveying possibilities for further development of aircoach services with a view toward converting as many as 17 DC-6 aircraft for use in "a new kind of density service linking major terminals." United has applied to the Civil Aeronautics Board for approval of tourist fares averaging 25 per cent under standard fares. United, which for a long time was a "hold out" against air coach services, apparently has found them profitable.

PHILLIP A. HOLLAR, vice-president of the American Car & Foundry Co., has been elected vice-president—assistant to president of the Association of American Railroads. As detailed in the news pages, where Mr. Hollar's new appointment is announced, he has served also in recent years as special assistant to Defense Transport Administrator James K. Knudson, as Deputy Under Secretary of Commerce for Transportation, and as chairman of the Transportation Council.

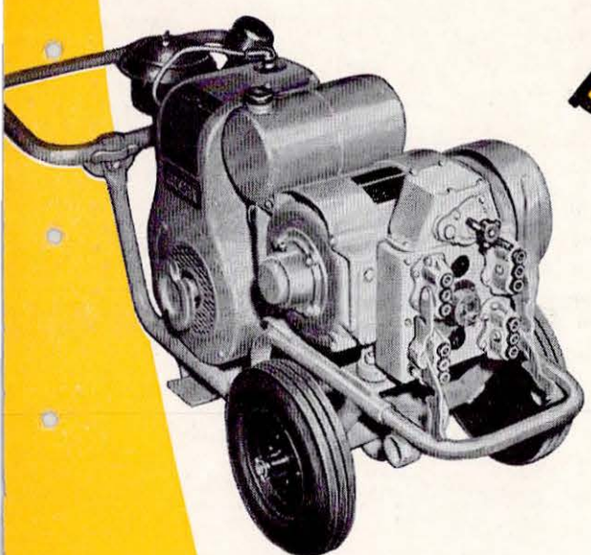
FINEST TRACK *at* LOWEST COST *in '53*

It's a SURE BET

IF YOUR BUDGET INCLUDES

JACKSON

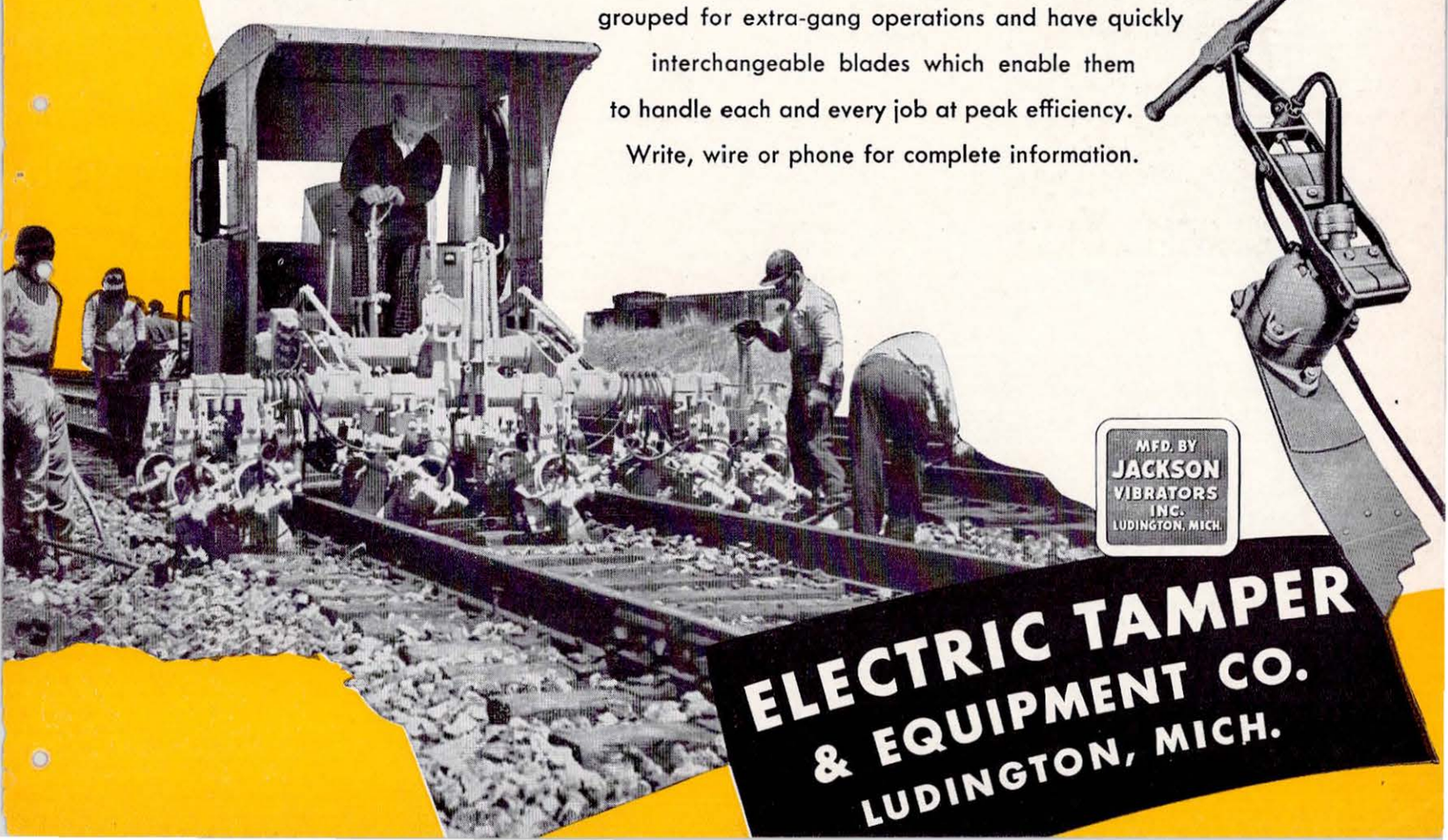
TAMPING EQUIPMENT



Model M-2 Power Plant serves 2 to 4 manually guided tie tampers. Rugged, compact and portable.

The experience of upwards of 60 leading roads and railroad contractors leaves no logical room for doubt—the JACKSON MULTIPLE is unrivaled in ability to put up the finest track at the lowest cost—regardless of lift or type of ballast. Just as efficient in very low-lift surfacing operations, this machine, in most instances, actually will save more than its cost in a single season.

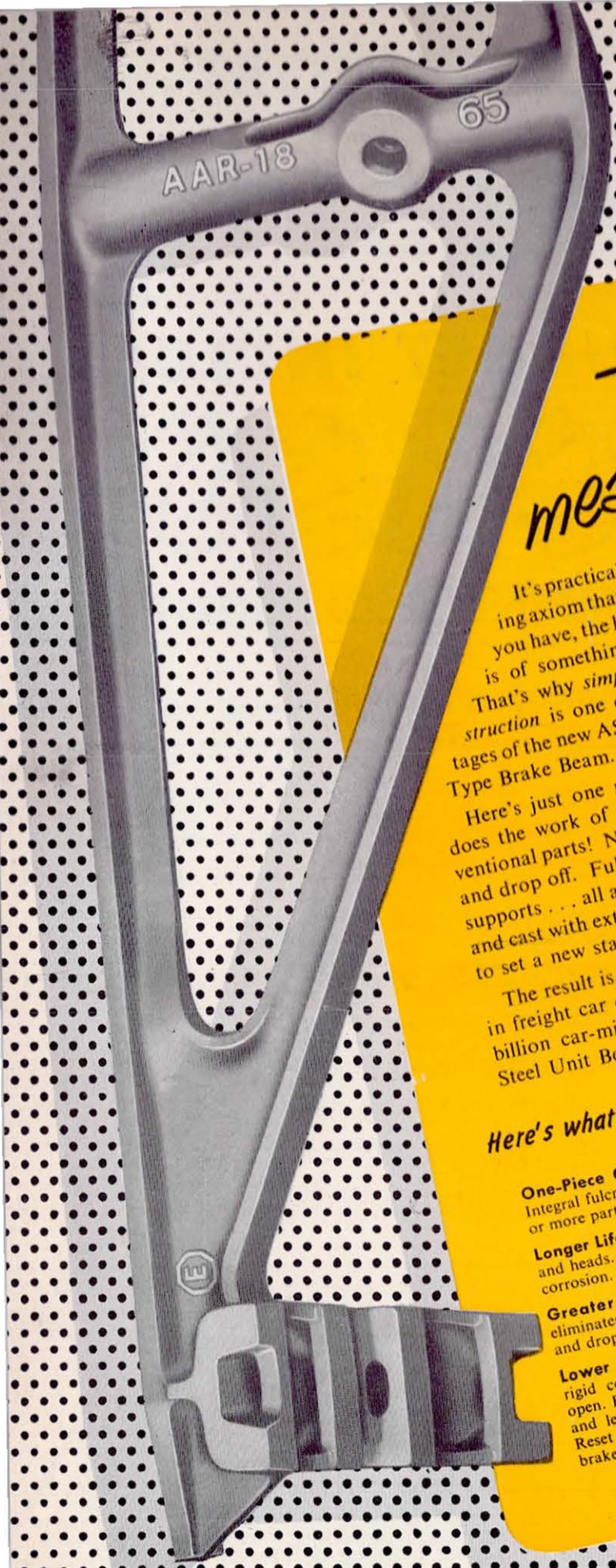
And for boosting section-gang productivity, there is nothing like JACKSON 4-tool outfits. They are easily portable, readily grouped for extra-gang operations and have quickly interchangeable blades which enable them to handle each and every job at peak efficiency. Write, wire or phone for complete information.



MFD. BY JACKSON VIBRATORS INC. LUDINGTON, MICH.

ELECTRIC TAMPER & EQUIPMENT CO.

LUDINGTON, MICH.



This extra safety means extra savings, too!

It's practically an engineering axiom that the fewer parts you have, the less chance there is of something going wrong. That's why *simple, one-unit construction* is one of the big advantages of the new ASF No. 18 Hanger-Type Brake Beam.

Here's just one rugged casting that does the work of the 8 or more conventional parts! Nothing to work loose and drop off. Fulcrum, heads and end supports . . . all are completely integral and cast with extra thick metal sections to set a new standard in strength.

The result is a high margin of safety in freight car operation. More than a billion car-miles with the ASF Cast-Steel Unit Beam prove it!

Simple, rugged construction leads inevitably to easier and lower-cost maintenance, as well. With no laps, welds, joints or rivets to loosen or flex, properly aligned levers and rods *stay* aligned —stopping false piston travel before it starts.

Let a qualified ASF Representative give you the facts on this new brake beam . . . find out how easy maintenance and faster servicing can make important savings in your costs per car mile. Write us today.

AMERICAN STEEL FOUNDRIES
410 N. Michigan Avenue, Chicago 11, Illinois
Canadian Sales:
International Equipment Co., Ltd., Montreal 1, Quebec

Here's what YOU can expect from the new ASF CAST-STEEL, HANGER-TYPE BRAKE BEAM

One-Piece Construction—Simple and rugged. Integral fulcrum and heads eliminate the usual 32 or more parts per car.

Longer Life—Extra thick, extra strong sections and heads. No elements or crevices to encourage corrosion. This beam *stays* strong.

Greater Safety—ASF Beam design virtually eliminates failures. There's nothing to work loose and drop off.

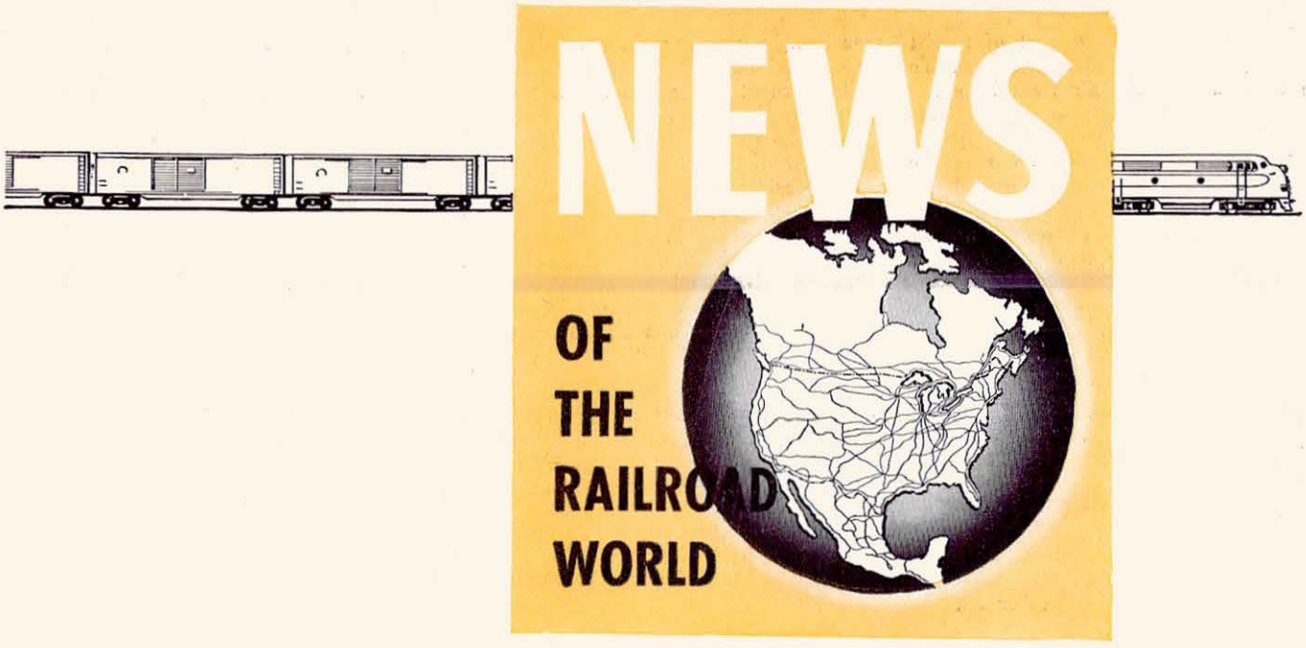
Lower Maintenance Costs—Positive, rigid construction; nothing to flex or open. Fulcrum stays in place . . . rods and levers remain in alignment. Reset piston travel only for brake shoe wear.

Faster Reclamation—Worn pin holes and surfaces easily built up by welding. Simply weld on new facings to renew burned heads.

Minimum Deflection—Typical at 18,000 lbs., .055"; at 30,000 lbs., .090". Set after 30,000 lbs., .001". Figures are far under AAR minimums.

Full AAR Approval—Tested and approved—and Certificate No. 65 issued.

Mint Mark of ⬡ *Fine Products*



I. C. C. Bureau Distributes 1951's Passenger Deficit by Traffic Types

Last year's passenger-service deficit of $680 million has been distributed by types of passenger-train traffic in a study issued by the Bureau of Accounts and Cost Finding of the Interstate Commerce Commission.

The study, Statement No. 4-52, was prepared by the bureau's Cost Section. It carries the usual disclaimer that it was issued "as information" and "has not been considered or adopted" by the commission.

The accompanying table, reproduced from the study, shows the distribution on the basis of fully-allocated costs.

There is also in the study another table which shows the 1951 deficit and its distribution on the basis of "direct costs" of passenger service. On this basis the total 1951 deficit was $418 million, $283 million of which was accounted for by losses from the carriage of passengers while the losses from head-end business totaled $135 million.

The $418 million figure "represents the approximate amount by which the revenues from passenger service would have to be increased if that service at the 1951 level of operations is to provide sufficient revenues to equal the direct costs exclusive of an allowance for return on property and equipment used in that service," the study said. It then calculated that the fully-allocated-costs deficit of $680 million becomes $746 million when there is added to it the cost of the passenger portion of the non-revenue freight.

"The difference between $746 million and $418 million, or $328 million," the study continued, "represents a burden which the freight traffic may be required to assume under value-of-service considerations. In other words, the $328 million would not be eliminated if the passenger service were entirely discontinued, and this amount would have to be absorbed by the freight traffic. In addition, the return on property and equipment which is not provided as a result of the passenger service becomes an added burden to be assumed by the freight traffic."

DISTRIBUTION OF PASSENGER DEFICIT AMONG TYPES OF PASSENGER-TRAIN TRAFFIC BASED ON TOTAL OPERATING EXPENSES, RENTS, AND TAXES

Type of passenger-train traffic	Passenger revenues (millions)	Passenger operating expenses, taxes and rents (millions)	Passenger deficit (col. 3 minus col. 2) (millions)	Distribution of total passenger deficit (percent)
(1)	(2)	(3)	(4)	(5)
Head-end traffic:				
Mail	$ 335	$ 339	$ 4 Deficit	0.6
Express ...	84	232	148 Deficit	21.8
Baggage, incl. milk	12	74	62 Deficit	9.1
Subtotal, head-end	431	645	214 Deficit	31.5
Passenger carriage .	1,018	1,484	466 Deficit	68.5
Total	1,449	2,129	680 Deficit	100.0

Railroad Development of Industrial Sites Described as Helpful to Cities

A tract of land assembled, owned and served by a railroad for industrial development purposes, serves a major city in several ways, George C. Smith, president of the Chamber of Commerce of Metropolitan St. Louis, told members of the American Society of Traffic and Transportation on October 30.

Such ownership, Mr. Smith said, "prevents the dissipation of good factory sites to other land use; removes the area of speculation in land prices; makes it easy for a manufacturer to assemble a site which might otherwise have to be bought from several—if not many—owners; and removes an element of frustration for the chamber of commerce."

Mr. Smith praised the "leading part" taken by railroads in promoting new principles of zoning which are (a) designed to remove the prejudice of city planners against industrial use of property, and (b) designed to protect property zoned for industry from encroachment by other so-called "higher uses"—such as single family dwellings. "The city planner is gradually being taught that basic dollars, those that come in from outside through sale of factory products, are the valuable dollars necessary to insure community prosperity and to finance improvements the planner has projected," he said.

"Bus and truck companies haye not developed important collateral services for promoting the communities they serve other than support to local agen-

cies and occasional support of tourist advertising of salable attractions. To my knowledge the air lines have not yet extensively developed programs beyond scheduling and service, yet I know of one company exploring the possibility of fostering industrial development in a remote part of the world as a means of promoting air freight and business travel," Mr. Smith added.

Robert J. Bayer, editor of Traffic World, was elected president of the society, succeeding E. G. Plowman, vice-president — traffic of the United States Steel Corporation. Other newly elected officers are: Executive vice-president, Earl B. Smith, vice-president and director of traffic, General Mills, Inc.; vice-presidents, C. J. Goodyear, traffic manager, Philadelphia & Reading Coal & Iron Co., and F. A. Doebber, traffic manager, Citizens Gas & Coke Utility, Indianapolis; and secretary-treasurer, H. A. Hollopeter, traffic director, Indiana State Chamber of Commerce.

Southern Dedicates New Orleans Yard, Naming It After Vice-President Oliver

The Southern's rebuilt freight yard at New Orleans, La., was dedicated as "Oliver Yard" on October 30.

It is named after Elmer R. Oliver, who has been the Southern's traffic vice-president for 28 years. Mr. Oliver participated in the dedication as did the Southern's president, Harry A. DeButts. The dedicatory address was delivered by E. Grosvenor Plowman, vice-president (traffic) of the United States Steel Corporation.

The ceremonies climaxed a "rubberneck" tour of Southern facilities in the New Orleans area, the tour having been made by some 300 business and civic leaders. They traveled in low-side gondola cars which had been fitted with seats and loudspeakers. The "barker" was O. B. Cloudman, Gulf freight traffic manager of the Alcoa Steamship Company.

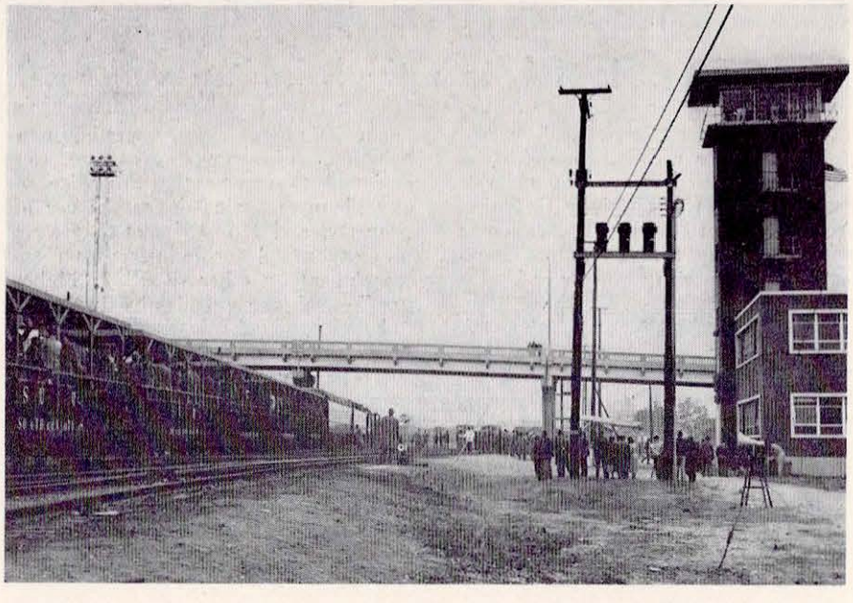
Mr. DeButts presided at the dedicatory ceremonies. In his dedicatory address, Mr. Plowman called Mr. Oliver "one of the great leaders of the modern South"—"one of the greatest traffic executives of the twentieth century."

Mr. Oliver's response was an expression of his "humble gratitude for this signal honor," and his "thanks" which came "from the bottom of my heart." The "Oliver Yard" sign, high on the new tower from which switching operations are directed, was unveiled by Mr. Oliver's granddaughter—Miss Mary Moss Oliver.

The tower is on the new office building, construction of which was part of the yard's rebuilding. Other new features include the communication system, and increased track capacities and expedited operations made possible by elimination of grade crossings. Costs of the rebuilding aggregated about $2 million.

(Left) Vice-president Oliver speaking at the dedicatory ceremonies —At far left, with Mrs. Oliver, is their granddaughter, Miss Mary Moss Oliver, who unveiled the yard sign.

(Below) Guests arrive at Oliver Yard tower for the dedication ceremonies which climaxed a two-hour tour of Southern facilities in the New Orleans area.



Who Is Better Judge Of Rates? Johnston Asks

Members of the council of the New Orleans Association of Commerce have been asked to consider whether pricing is properly the function of the industry concerned or the function of a government bureau. Wayne A. Johnston, president of the Illinois Central, speaking to the Council on November 6, put it this way:

"At present, the Interstate Commerce Commission denies many freight rates which are reasonable and lawful, but which the commission insists would cause the railroads to lose traffic. As a result, rail rates have been held at a depressed level far out of adjustment with the general price level on which other goods and services move freely in the market. Wouldn't you say this is a question for managerial judgment instead of governmental judgment?

"Too many railroads, realizing that they have to appeal to the commission for relief, have been reluctant to speak out frankly on this subject. I have the utmost esteem for the hard-working and patriotic members of the commission and their staff of experts, but I contend that the individual railroads, with their far-flung traffic offices and their thousands of day-to-day contacts

with shippers, are the best judges of what rates will move what traffic."

Mr. Johnston called upon the business men to help remove "the roadblocks now standing in front of your railroads." In addition to the question of competition subsidy, he suggested other needed changes such as "the fixing of parcel post rates to actually cover the cost of service, and the filing of rates by contract truckers so we can examine their rates as easily as they can ours." He said he was confident that such changes are coming.

"What other industry," he asked, "could have withstood the onslaught of subsidized competition for the last 30 years without being driven to the wall in the unfair struggle? What other industry could have come back from the depths of the depression as the railroads did, bearing in mind that a great part of the American public believed the iron horse was doomed as an outmoded form of transportation? What other industry could have withstood such abuse and neglect and still survived to continue to be the backbone of American transportation? I believe our railroads have earned the highest praise in coming through the experience of the last 30 years without suffering the fate of other railroads around the world—being nationalized."

Net Income for 1952 Reaches $502 Million

Class I railroads in the first nine months this year had an estimated net income, after interest and rentals, of $502,000,000, according to the Bureau of Railway Economics, Association of American Railroads.

The 1952 figure compares with net income of $391,000,000 for the first nine months last year. Net railway operating income in the nine-month period this year totaled $732,335,415, compared with $606,459,584 in the nine months of 1951.

Estimated results for September 1952 showed net income of $95,000,000, compared with $53,000,000 in September 1951. The September 1952 net railway operating income was $120,912,578. During the same month last year net railway operating income totaled $78,668,841.

In the 12 months ended with September, the rate of return averaged 4.25 per cent, compared with 3.78 per cent for the 12 months ended with September 1951.

Gross in the first nine months of 1952 amounted to $7,753,138,898, an increase of 1.7 per cent over the 1951 period, when gross amounted to $7,620,559,529. Operating expenses in the 1952 period were $5,972,924,562, compared with $6,003,270,343, a decrease of 0.5 per cent.

Twenty Class I roads failed to earn interest and rentals in the first nine months of 1952, according to the A.A.R. report.

CLASS I RAILROADS — UNITED STATES

	1952	1951
	Month of September	
Total operating revenues	$ 942,139,287	$ 856,153,461
Total operating expenses	674,576,858	657,912,594
Operating ratio—percent	71.60	76.85
Taxes	129,932,014	105,535,059
Net railway operating income (Earnings before charges)	120,912,578	78,668,841
Net income, after charges (estimated)	95,000,000	53,000,000
	Nine Months Ended Sept. 30	
Total operating revenues	$7,753,138,898	$7,620,559,529
Total operating expenses	5,972,924,562	6,003,270,343
Operating ratio—percent	77.04	78.78
Taxes	912,274,900	859,620,840
Net railway operating income (Earnings before charges)	732,335,415	606,459,584
Net income, after charges (estimated)	502,000,000	391,000,000

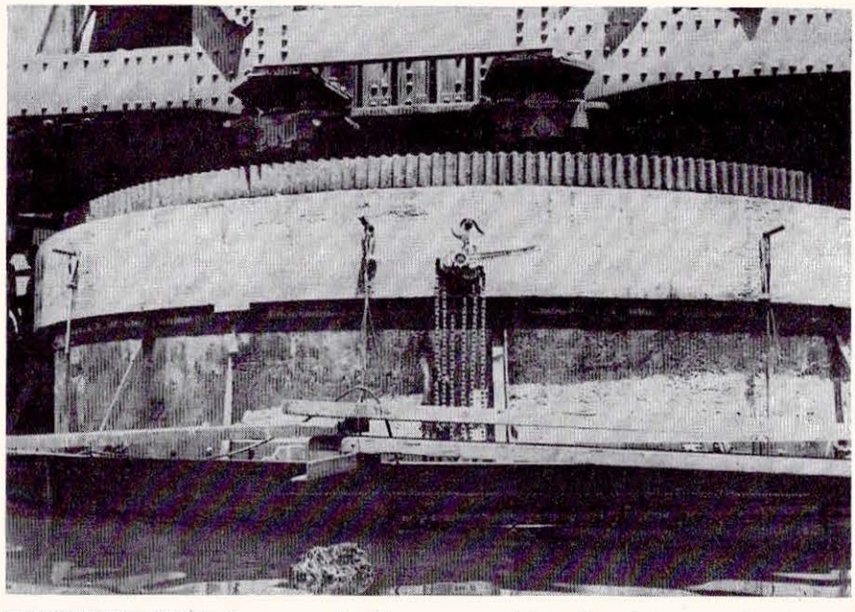
Lack of Volume Not R.R. Problem, N.W. Board Told

"I think it is a mistake to suppose that inadequacy of railroad revenues has been due to lack of traffic or to inroads that have been made by other forms of transportation," M. L. Countryman, Jr., vice-president and general counsel of the Northern Pacific, told members of the Northwest Shippers Advisory Board on October 29.

Speaking at the board's 102nd regular meeting at Fargo, N.D., Mr. Countryman explained that while "a large volume of traffic is handled by other forms of transportation, the railroads are still handling a larger volume than all the rest combined, and they are handling a volume that is from 40 to 45 per cent greater than the largest volume they handled in any year prior to World War II. The lack of prosperity in the railroad industry has been due, principally, if not solely, to repressive regulation of the general level of their rates."

Mr. Countryman said the importance of railroads to the country's economy is reflected in public consternation created by any threat of a nationwide strike. "It seems simply ridiculous to say that the country cannot afford to pay rates that will insure railroad prosperity."

After describing growth of present regulation of railroad rates, Mr. Countryman asked: "Is it sound public policy to regulate railroad rates on the basis of their supposed effect on the movement of traffic, or to restrain the railroads from making increases because they may lose traffic in consequence? The matter of pricing railroad services so they will sell in the



DISINTEGRATION of concrete in this 26-ft. diameter circular pier supporting the Bear Creek swing bridge of the Baltimore & Ohio, at Baltimore, presented a complicated repair problem. The service life of the installation was lengthened by encasing the pier with 3/16-in. wrought iron plate, 7 ft. in height and extending approximately one foot above the water line. After this casing had been made watertight, the disintegrated concrete was removed and the resulting 16-in. void between the plate and pier was filled with new concrete. The wrought iron plate was left in place to provide an added measure of protection against corrosion. Fabrication of the wrought iron plates was done by the B&O. Actual repair work was carried out by the Masonry Resurfacing & Construction Co., Baltimore.

EXCHANGING NOTES ON RAILROADING in Switzerland and the United States are Hugo Gschwind (left), president of the Swiss Federal Railroads, and Frank J. Jerome, executive vice-president of the New York Central. Mr. Gschwind is holding a model of a 1,500-hp. NYC diesel unit and Mr. Jerome is examining a model of a Swiss 4,000-hp. electric unit.

competitive market ought to be solely the business of railroad management. Overpricing can hardly be a matter of public concern if no one is hurt but the railroad itself. So long as no need exists to protect the shipper from extortion, the government should refrain from interfering.

"So far as overall level of transportation charges is concerned, the tax policies of the government do not seem designed to secure low cost transportation for the public. I sometimes wonder if the shipping public realizes the extent to which the railroads have been made tax collectors. If transportation costs are believed to be too heavy, an obvious remedy would be to exempt from the income tax all revenues derived from transportation and repeal the direct tax on transportation."

Flood Claim Test Cases Moved to Kansas City

The question of railroad liability for freight claims arising directly from the disastrous 1951 Kansas flood, will shortly be aired in test cases involving three suits against the Santa Fe.

Originally filed in Chicago, the suits were transferred on October 22 to federal court at Kansas City, Mo., by order of Federal Judge J. Sam Perry of the U.S. District Court for the Northern district of Illinois, on a motion of counsel for the Santa Fe. The plaintiffs are: Associated Grocers of Colorado, Inc.; Jewell Tea Company; and General Cigar Company, which suffered damage to a carload of cigars valued at almost $90,000.

The road said it would seek an early trial, as all witnesses necessary to prove that the flood was an act of God are readily available in Kansas City.

The U.S. Supreme Court, in a decision in connection with the Kansas flood of 1903, exonerated railroads from flood liability on the ground that the flood was an act of God, and that carriers were not responsible under the terms of their bill of lading. Since the 1951 flood greatly exceeded the 1903 flood in severity, all the roads entering Kansas City have advised shippers that they cannot accept responsibility for loss or damage resulting from it.

D.T.A. Seeks More Time On Tank Car AB Brakes

Unless the Interstate Commerce Commission extends its deadline for equipping tank cars with AB brakes, it will be necessary to remove about 7,300 such cars from interchange service on December 31, the Defense Transport Administration advised last week.

Testifying at a Chicago hearing before Commissioner Patterson, David E. Smucker, chief of D.T.A.'s Railroad Transport Division, said D.T.A. considers it "advisable" to extend the time beyond December 31.

The present deadline for equipping freight cars with AB brakes was set by the commission last July. At that time the deadline was set back six months—from June 30 until December 31, 1952 (*Railway Age*, August 4, page 14).

Mr. Smucker, who limited his testimony to tank cars, said the commission's deadline order would fall most heavily on general purpose tank cars of the TM and TMI designation, i.e., those used in transportation of petroleum products, non-corrosive chemical products and oils.

The D.T.A. official said efforts to increase construction and delivery of tank cars have been "almost universally ineffective" because of heavy defense needs for steel plate. He said 5,137 new tank cars were installed in service in the first nine months of this year.

Freight Car Loadings

Loadings of revenue freight in the week ended November 1 totaled 862,012 cars, the Association of American Railroads announced on November 6. This was an increase, due chiefly to larger coal loadings, of 101,271 cars, or 13.3 per cent, compared with the previous week; an increase of 24,395 cars, or 2.9 per cent, compared with the corresponding week last year; and a decrease of 1,137 cars, or 0.1 per cent, compared with the equivalent 1950 week.

Loadings of revenue freight for the week ended October 25 totaled 760,741 cars; the summary for that week, compiled by the Car Service Division, A.A.R., follows:

REVENUE FREIGHT CAR LOADINGS
For the week ended Saturday, October 25

District	1952	1951	1950
Eastern	128,303	142,692	151,973
Allegheny	145,152	174,597	175,121
Pocahontas	22,748	68,744	68,086
Southern	113,718	135,632	134,805
Northwestern	146,759	133,113	148,009
Central Western	138,014	142,761	142,396
Southwestern	66,047	67,261	67,545
Total Western Districts	350,820	343,135	357,950
Total All Roads	760,741	864,800	887,935
Commodities:			
Grain and grain products	58,163	52,834	58,974
Livestock	16,194	17,584	16,213
Coal	45,279	167,952	163,220
Coke	13,669	16,309	16,354
Forest products	46,501	46,501	46,537
Ore	87,228	73,997	75,524
Merchandise l.c.l.	75,027	75,437	88,046
Miscellaneous	418,680	414,186	423,067
October 25	760,741	864,800	887,935
October 18	838,377	886,648	891,230
October 11	842,713	868,683	888,889
October 4	851,866	858,757	863,903
September 27	862,061	864,575	880,186
Cumulative total 43 weeks	31,310,966	33,822,587	32,030,816

In Canada.—Carloadings for the seven-day period ended October 21 totaled 88,243 cars, compared with 79,484 cars for the previous seven-day period, according to the Dominion Bureau of Statistics.

	Revenue Cars Loaded	Total Cars Rec'd from Connections
Totals for Canada: October 21, 1952	88,243	34,925
Cumulative Totals October 21, 1952	3,344,455	1,434,871

Canton Dedicates Its New Ore Pier Conveyor Belt

Formal dedication ceremonies for a new conveyor belt system on the Canton Railroad's ore pier at Baltimore,

CAR SURPLUSES, SHORTAGES

Average daily freight car surpluses and shortages for the week ended November 1 were announced by the Association of American Railroads on November 6 as follows:

	Surplus	Shortage
Plain Box	0	7,043
Auto Box	0	119
Total Box	0	7,162
Gondola	452	2,447
Hopper	8,671	965
Covered Hopper	0	246
Stock	212	65
Flat	25	221
Refrigerator	1,342	98
Other	381	0
Total	11,083	11,204

Md., were held October 29 at Baltimore. More than 300 guests were on hand when Mayor D'Alesandro pressed the button to place the new conveyor in operation.

This conveyor belt system, consisting of two belt segments and an accompanying 1,500-ton "storage" hopper, has a rated capacity of 3,000 tons an hour. It is designed to increase substantially the unloading capacity of the ore pier.

D. A. Lindley, president of the Canton, said the new conveyor system, used with existing unloading towers, will give greater flexibility in discharging ship cargoes of ore. The conveyor-tower combination is such that two or more kinds of ore can be handled simultaneously, thereby speeding the discharge of multiple-lot cargoes.

Governor Theodore R. McKeldin of Maryland was among those attending the dedication. In a brief speech he complimented the road's officers and directors for their "expression of faith in this great harbor." Others attending the ceremonies included transportation and business leaders from Baltimore and other points in the East.

"Prejudging" Reparations Case Avoided by Div. 2

In a move to avoid prejudgment of a government reparations case, Division 2 of the Interstate Commerce Commission has voted to withhold its decision in another proceeding involving rates on airplanes and airplane parts.

The division issued a "public notice" in which it said the reparations case and the rate complaint case "present the same or substantially the same issues with respect to rates for the future."

The government reparations case, docketed as No. 29761, is one of the 17 so-called wartime reparations cases now pending before the I.C.C. This particular case assailed wartime rates on airplanes and airplane parts.

The complaint which Division 2 will not decide is docketed as No. 30712. It was filed by the Aircraft Industries Association of America and it assailed present and future rates on the same commodities involved in the reparations case.

"The government is entitled to a decision (in No. 29761) on the record which it has made," the division said. "A decision here by Division 2 before that time might lead to a prejudgment —or at least a partial prejudgment— of the government's case."

I.C.C. Asked to Dismiss Complaint on LI Fares

Dismissal of a Pennsylvania Railroad complaint on Long Island commutation fares has been asked by the New York Public Service Commission.

The Pennsylvania complaint was filed with the Interstate Commerce Commission in mid-October (*Railway Age*, October 20, page 11). It charged that intrastate commuter fares on the LI "fail to produce sufficient revenues to cover the cost of providing the service." It asked the I.C.C. to raise the fares, "after due hearing," to a level which would remove "unjust discrimination against interstate commerce."

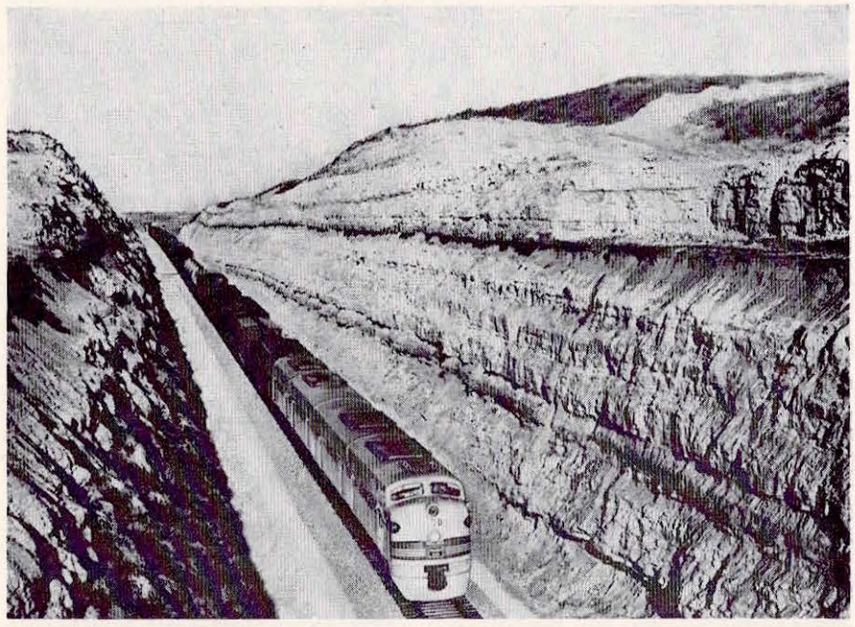
The petition by the New York state commission was for "the immediate purpose" of getting the Pennsylvania complaint dismissed. The P.S.C. said legislation, backed up by court decisions, has recognized its "primary jurisdiction" in regulation of intrastate rates and fares.

The PRR complaint has been docketed as No. 31120. The I.C.C. authorized the state commission to intervene in the case as a party in opposition.

Shoemaker Says RR Plight Challenges All Americans

"It is not only unjust and downright impractical, but absolutely dangerous to hold the idea that railroad management can continue to produce miracles of efficiency and stay solvent when government regulations restrict our ability to compete on equal terms, when government holddown of our earnings has depleted our cash and borrowing power," Perry M. Shoemaker, president of the Delaware, Lackawanna & Western, said in Saratoga Springs, N.Y., on October 31.

Addressing the annual meeting of the New York State Grange, Mr. Shoemaker emphasized that railroads, without adequate earnings, cannot make investments in new equipment, improved facilities and modern methods. "In your great task of feeding more than 158,000,000 Americans you need the help of the railroads," he told his audience. "Railroads are ready and willing to carry their full share of this



THE FIRST SCHEDULED FREIGHT TRAIN on the Burlington's new Kansas City short-cut heads through spectacular Summit cut as the new $16-million line was opened for business on October 28. The 71-mile line shortens the "Q's" Chicago-Kansas City route by 22¼ miles. Its construction, which took 34 months, involved 49 miles of new railroad plus rebuilding and relocating 21.8 miles of existing track. "The sole purpose of the line," said President Harry C. Murphy, "is to provide better and faster through passenger and freight service between Chicago and Kansas City. It is designed for high-speed, heavy-duty freight traffic." New passenger services are expected to be placed in effect early in 1953. New overnight freight schedules have already been established.

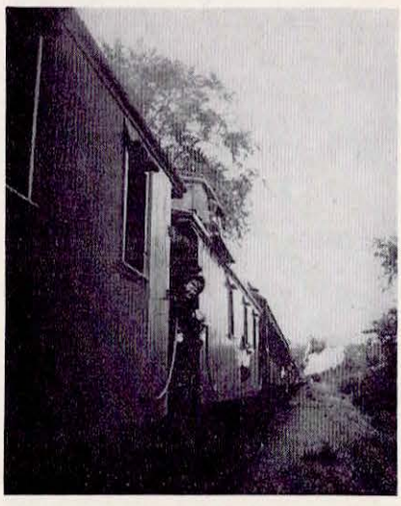
task and more. But to do it we need the support of every single Granger and every single farmer in the country. Our problems of governmental strangulation are no longer a matter just for committee action and resolutions. They are real problems for every thinking individual."

Mr. Shoemaker, on October 24, addressed the annual meeting of the Eastern Industrial Traffic League in New York City. On that occasion he said that "the present chaos in transportation regulation, and its very real threat of socialization, stands as a challenge to the statesmanship of American business. Responsibility for action rests upon business leadership —the same business leadership that today has the overriding challenge of standing up, being heard and acting on the economic salvation of this country."

Defense Transport Group Honors Transport Leaders

Ten transportation leaders have received awards from the National Defense Transportation Association for "meritorious achievement in the furtherance of the aims and objectives of the association and for valuable and noteworthy service in the promotion of transportation preparedness for national defense."

Those receiving the Tributes of Appreciation were: Col. Melvin L. Craig, U.S.A. (retired); Arthur G. Wood, American Car & Foundry Co.; Frank L. Grimm, president, O'Boyle Tank Lines; Earl B. Padrick, chairman, Western Military Bureau; James F. Haley, Koppers Company; Capt. Ward T. Shields, U.S.N., Joint Chiefs of Staff; Brig. Gen. Frank S. Besson, Jr., Army assistant chief of transportation (operations); Chester C. Thompson, president, American Waterways Operators; Louis W. Byrne, Port of New York Authority; and James K. Knudson, Defense Transport Administrator, who was one of the featured speakers at the association's recent annual convention in New York.



DIESELIZATION of the Rutland—plus pending abandonment of its 57-mile Chatham, N.Y.-Bennington, Vt., line—will bring to an end the colorful "Gay 90s" excursions between Chatham and Rutland, Vt. Sponsored by the Chatham Exchange Club, the annual trips have attracted an average of over 800 rail fans, who travelled in clothes, coaches and cabooses reminiscent of "turn-of-the-century" railroading.

"THE FREIGHT GOES THROUGH"

Soon to be released by the Freight Loss & Damage Section of the Association of American Railroads is a 20-min. sound-color film, "The Freight Goes Through." Representatives of railway, traffic and the general business press were recently given a "sneak" preview of the master print at A.A.R. headquarters in Chicago. These reporters were agreed that the film will prove an effective tool in the campaign to cut freight damage claims.

Dedicated to reduction of rough handling, the film has several characteristics which should render it highly effective with yard and train service personnel. It uses no trick photography (other than regular slow-motion) in its vivid portrayal of the effect of impact on both lading and equipment. It stresses job pride ("damaged freight reflects on your skill and experience") rather than fear of discipline as the motivation for doing a better job. It talks "on the ground" language. It uses no professional actors and the crews selected for parts are satisfyingly natural, thus leaving no opportunity for "horse laughs" from those in the audience.

"The Freight Goes Through" was progressed to the "shooting" stage by the section's former special representative, A. L. Green, now retired. It was completed by his successor, R. A. Fassold, who is also special representative of the section. Prints will soon be available to member lines at reproduction cost, $125.00. A limited number of prints will also be available for single showings through C. A. Naffziger, director of the section, at 59 East Van Buren st., Chicago 5.

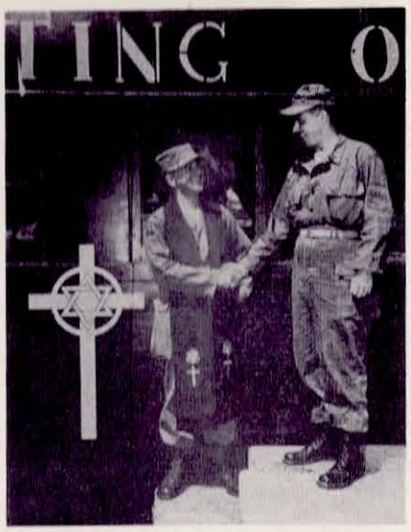
Railroads Vote on Boost In Reefer Mileage Rates

Member roads of the Association of American Railroads have been asked to vote on a proposed increase in refrigerator car mileage rates paid by railroads.

The general committee of the A.A.R. Operating-Transportation Division recommended the increase, and the A.A.R. board of directors on October 31 decided to submit the question to a vote by the railroads.

Mileage rates paid on general purpose refrigerator cars would be increased from 3 cents per mile to 3.5 cents. For RB type refrigerator cars, the proposed increase is from 2.5 cents to 3.2 cents.

The A.A.R. board also instructed the general committee to institute studies on refrigerator car mileage rates, and per diem rental rates, paid for use of freight cars of other railroads.



U. S. Army photo

A SPECIAL CHAPEL CAR, a remodeled railway coach, has just been provided to serve American military personnel stationed at 67 points along the Korean National Railroad. The mobile chapel, now on a tour of South Korea, was dedicated by Chaplain (Major) Alfred S. Kline, shown here (left), with Chaplain (First Lieutenant) Herbert D. Teitelbaum.

D.T.A. Seeks Materials For 2nd Quarter of 1953

The Defense Transport Administration last week sent to the Defense Production Administration its request for controlled materials for the second quarter of 1953.

For domestic railroads and transit lines, D.T.A. claimed sufficient materials to construct the following: 936 locomotive units; 27,000 freight cars (other than tank cars); 1,500 tank cars; 100 passenger-train cars; 150 rapid transit cars; 25 street cars, and 125 trolley coaches.

In addition, D.T.A. asked for allocation of 450,000 tons of new rail to be laid in replacement during the April-June period.

The D.T.A. request for motor carriers included a claim for materials to construct 325,000 trucks and truck-tractors in next year's second quarter. The agency asked for 110,000 truck

bodies; 14,500 truck trailers, and 2,000 single unit buses.

Material for 287 inland waterway and harbor vessels was also requested by D.T.A. Of the total number, 82 already are under construction. Among these 82 are 14 petroleum and liquid cargo barges, 42 dry cargo and general cargo barges and eight railroad lighters and car floats. Construction of the remaining 205 vessels is scheduled to begin in the second quarter of 1953. Included in this group are 41 petroleum and liquid cargo barges, 125 dry cargo and general cargo barges and 19 railroad lighters and car floats.

Television Program to Tell Railroad Story

How the railroads provide mass transportation service for the nation's industry, commerce and agriculture is scheduled for television presentation on the "American Inventory" program over the National Broadcasting Company television network on November 16, from 2 to 2:30 p.m., Eastern Standard Time (see newspaper listings for hour and day in other time zones).

I.C.C. Issues 1952 Edition Of Accounting Rules

A 1952 edition of "Uniform System of Accounts for Railroad Companies" has been issued by the Interstate Commerce Commission. Accounting regulations contained in the publication are effective as of October 1, 1952, and all rail carriers subject to Part I of the I.C. Act are required to comply.

This 132-page compilation of I.C.C. accounting rules is the first by the commission since 1943. Interim compilations have been issued from time to time by the Association of American Railroads. The new I.C.C. publication is for sale at the Government Printing Office, Washington, D.C., for 35 cents per copy.

Court Says I.C.C. Power To Suspend Is "Exclusive"

The power to suspend new rates for the limited period authorized by the Interstate Commerce Act "is vested exclusively in the Interstate Commerce Commission," and the courts are without power to review the exercise of this administrative discretion.

This view was expressed by a U.S. District Court in a recent decision in the case of *F. William Carlson et al v. U.S. and I.C.C.* The case was one in which the commission refused to suspend tariffs filed by four interstate bus carriers.

Protestants went to court seeking an order to compel the commission to suspend the new rates pending hearing and decision.

While the court's ruling had to do with motor carrier rates under Part II of the I.C. Act, the court noted that its ruling applies with equal force to suspension provisions in Parts I, III and IV of the Act.

Weight of F-M Engine —A Correction

The weight of the diesel engine which is said to have been the heaviest shipment ever dispatched on a single railroad car from the Beloit, Wis., plant of Fairbanks, Morse & Co., was reported incorrectly in *Railway Age* November 3, page 18. The 3,500-hp. F-M engine actually weighs nearly one-quarter of a million pounds—not "nearly a quarter of a ton."

Rail Wage Stabilizers Report on Year's Work

The Railroad and Airline Wage Board handled 1,057 cases during the first year of its operations, according to a statement issued recently by the board's chairman, Nelson M. Bortz. The cases involving railroads totaled 745, the air lines having been involved in the other 312.

(Continued on page 77)

ORGANIZATIONS

Maintenance of Way Club Organized at St. Louis

A club composed of railway engineering and maintenance personnel, plus representatives of supply companies serving their field, has been organized at St. Louis. The club's first meeting was held on October 27, with A. B. Chaney, assistant chief engineer system-maintenance, Missouri Pacific, acting as temporary chairman. The objective of the new club—which has been named the Mississippi Valley Maintenance of Way Club—is to "meet and discuss questions pertaining to design, construction and maintenance of fixed properties of railroads."

The purpose of the first meeting, which was attended by 213 persons, was to adopt a constitution and to elect officers. Those elected were: President, V. C. Hanna, chief engineer, Terminal Railroad Association of St. Louis; first vice-president, Mr. Chaney; second vice-president, F. R. Micheal, engineer of track, Wabash; secretary-treasurer, P. E. Odom, chief clerk to vice-president, operations, St. Louis-San Francisco.

The club expects to hold monthly dinner meetings during the fall, winter and spring seasons. More than 300 persons have already joined.

The **Washington, D.C., Chapter** of the **Railway Business Women's Association** will hold its next meeting in Washington on November 18. Robert S. Henry, vice-president of the Association of American Railroads, will be guest speaker.

"Past Presidents, Old Timers, New Candidates Night" will be marked by the **Transportation Club of Louisville** at the Kentucky Hotel at 6:30 p.m. on November 18.

The **Cincinnati Traffic Club** will hold its fall stag party at the Hotel Alms on November 13.

The **Chicago Passenger Club** will hold its annual installation of officers at the Midland Hotel on November 20.

The **San Francisco Traffic Club** will have its "Bosses Night" and election of officers for the coming year on November 19.

The **Oakland** (Cal.) **Traffic Club** will hold its Terminal Night "Sports" meeting on November 18, under direction of Chairman Allen Mitchell.

The **Railway Business Woman's Association of Chicago** will hold its "Birthday Luncheon" at the South Shore Country Club on November 15.

The **Traffic Club of Chicago** will visit the Beloit (Wis.) works of Fairbanks, Morse & Co. on November 11. A special train will be operated by the Chicago & North Western from Chicago, leaving at 8:05 a.m. and returning at 6:15 p.m. At a special luncheon, Sam Campbell, C&NW lecturer, will present a color film entitled "The North Country." Prior to and after this luncheon, traffic club members will be conducted on tours through the 118-acre locomotive-building plant.

The annual meeting of the **National Industrial Traffic League** will be held at the Hotel Statler, New York, on November 20 and 21. Business sessions are scheduled for 10 a.m. and 2 p.m. on the 20th, with a membership luncheon at 12:15 p.m., at which E. T. McCormick, president, New York Curb Exchange, will be the speaker. Business sessions on the 21st are scheduled for 9 a.m. and 2 p.m., with a board of directors meeting at 12:15 p.m.

EQUIPMENT AND SUPPLIES

PASSENGER CARS

Canadian National Orders 300 Passenger-Train Cars

The Canadian National has ordered 300 passenger-train cars costing over $50,000,000. The Canadian Car & Foundry Co. will build 161 first-class

coaches, each with 76 seats. The Pullman-Standard Car Manufacturing Company will construct 84 sleeping cars of various types; six dinette cars equipped for lunch-counter service; 14 standard dining cars; nine cafe-parlor cars; six parlor cars; 10 buffet sleepers; eight buffet-lounge cars; and two parlor-buffet cars. It is expected that deliveries will be spread over the next two years. Earlier this year the CNR requested bids from American and Canadian manufacturers for construction of 194 passenger-train cars (*Railway Age*, March 17, page 112).

SIGNALING

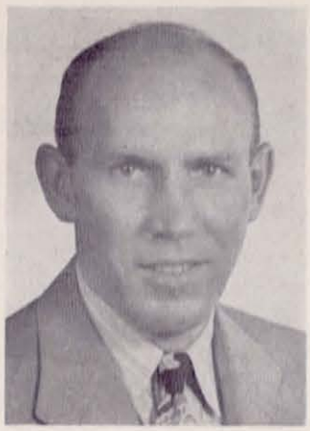
Modernization of signals and interlocking plants between Blue Island, Ill., and McCook will be carried out jointly by the **Indiana Harbor Belt** and the **Baltimore & Ohio Chicago Terminal.** This 14-mile section of road is used jointly by the two roads and is owned partly by each. It is operated by the IHB. When the work, expected to begin in December, is completed, it will mark full signal modernization of all IHB main trackage.

SUPPLY TRADE

A. O. Williams has been appointed director of engineering of the Industrial Truck division of the **Clark Equipment Company.** He will coordinate and head all Clark engineering activities in the field of material handling equipment. Mr. Williams was

A. O. Williams

graduated from the University of Michigan in 1914, and began his career with Clark in 1917. In 1936, he helped create Clark's Railway division, of which he served as chief engineer and later general manager. In 1951, when the Railway division was dissolved, Mr. Williams returned to the engineering department of the Industrial Track division, where he has been engaged in new product research. Mr. Williams holds 90 patents for mechanisms in the railroad and industrial truck fields. In 1920, as chief engineer and assistant to vice-president in charge of engineering, he helped design and produce the first gas-powered platform lift-truck on which Clark founded its material handling equipment business.



The Reade Manufacturing Company —makers of weed and brush killing chemicals—has announced completion of its new agronomy research laboratory in Jersey City, N. J. This laboratory will be under direct supervision of Dr. Leland Butler (left), with Herman Steudel (right), as assistant. The new laboratory will be used for study of plant control.

The **Portland Cement Association** has opened a new district office in Helena, Mont., with **Jack Y. Barnes,** formerly field engineer with the association's Des Moines (Iowa) office, as district engineer in charge. The new office is located in Rooms 9-10, Gold block, Helena, and will carry on the P.C.A.'s educational work and technical service activities throughout the state of Montana.

Solomon R. Baker has been elected president of the **Pyrene Manufacturing Company,** Newark, N.J. Mr. Baker also is president of Pyro, Inc., which purchased a majority stock interest in Pyrene some time ago.

Carl T. Kleinsorge, M & K Distributing Co., 2939 Getty street, Kansas City, has been appointed industrial distributor for the **Briggs Filtration Company** for Kansas and western Missouri.

The **International Harvester Company** has acquired the stock of the **Frank C. Hough Company,** Libertyville, Ill., which will be operated as a wholly owned subsidiary of International Harvester. **Frank C. Hough** will continue as president of the subsidiary company.

James M. Mead has been elected assistant vice-president of **Joseph T. Ryerson & Son, Inc.** Mr. Mead joined the company at New York in 1919 and, after a long period of sales work, was appointed assistant plant manager at Philadelphia, advancing to manager in 1941. In 1946 he was appointed manager of the New York steel service plant and earlier this year was appointed first assistant to vice-president in charge of purchasing, procurement and merchandising, with headquarters at Chicago.

M. R. Brice has been appointed division manager, industrial control sales, for **Cutler-Hammer, Inc.** Mr. Brice will have responsibility for the company's industrial control line, which deals with the textile, locomotive, pump and compressor industries, and "Unitrol." He formerly was an industry specialist, with headquarters in Milwaukee.

Harold C. Smith, Jr., has been appointed manager, rail and government sales, for the **Carborundum Company.** In this capacity, he will be

Harold C. Smith, Jr.

responsible for sales of abrasive products to government agencies and the railroad industry and also will perform special assignments under di-

(Continued on page 72)

New Nalco® 39

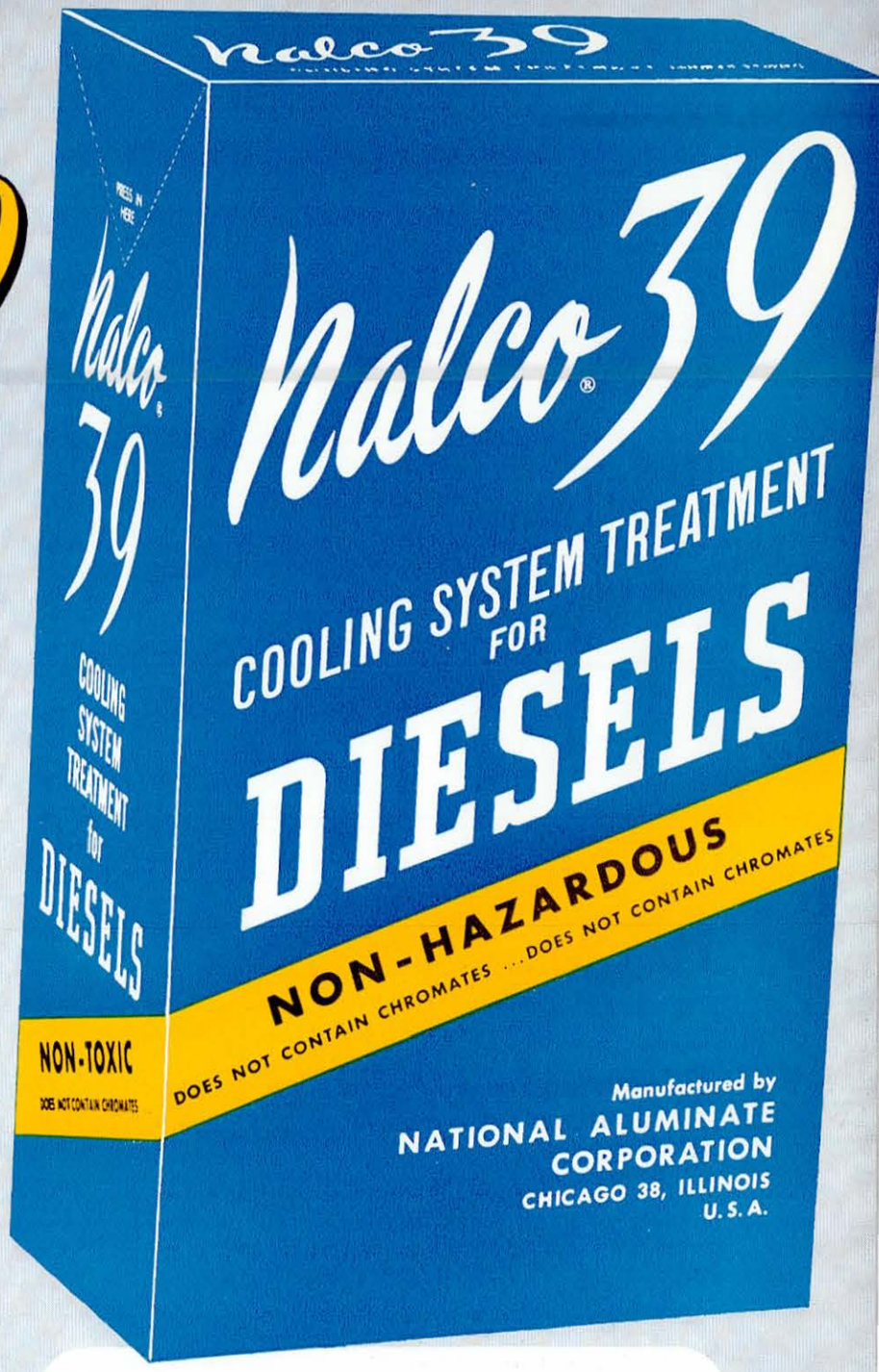
NON-CHROMATE
Cooling System Treatment for Diesels

- NON-HAZARDOUS
- NON-TOXIC
- COMPLETE PROTECTION

1. Provides corrosion-preventive film on *all* metal surfaces.
2. Prevents electrolytic action.
3. Provides pH balance for optimum metal protection.
4. Harmless to non-metals.

- COMPATIBLE WITH ANTI-FREEZE SOLUTIONS
- PACKED IN HANDY BOXES OR 100-LB. DRUMS
- EITHER IN PELLETS, OR PULVERIZED
- EASY TESTING WITH NEW NALCO 39 KIT

Nalco 39 Test Kit is complete for fast, simple, accurate concentration tests . . . to give you best results from cooling system treatment.



NALCO 39 . . . the SAFE, treatment for diesel locomotive cooling systems is a result of exhaustive Nalco research, development and field testing. Original aim of this search was a non-toxic, non-hazardous chemical to equal chromate treatments in protective action. Result is a formula which eliminates all objectionable features of chromate use, while offering effective protection for all cooling system metals—particularly aluminum.

Where treatment changeover causes inadvertent mixing of Nalco 39 and chromates, protection will never be less than that provided by chromate type treatments.

NATIONAL ALUMINATE CORPORATION
6200 West 66th Place • Chicago 38, Illinois
Canadian inquiries should be addressed to: Alchem Limited, Burlington, Ont.

A Nalco **PRODUCT . . . Serving Railroads through Practical Applied Science**

BLUE STREAK
FAST FREIGHT
308

Cotton Belt Meets Tough Haulage Problems With All-Purpose Alco-GE Road Switchers

The St. Louis Southwestern railroad is finding all-purpose Alco-GE road switchers to be the answer to its toughest haulage problems . . . whether in passenger, freight, or switching service.

"These Alco-GE locomotives handle an exceptional variety of assignments," comments a high official of the Cotton Belt, "and they do the job with greater economy than either steamers or any other capacity diesel that we own."

Alco-GE 1600-hp road switchers are "at home" on any Cotton Belt job—from the speedy "Blue Streak" freight service to the crack "Lone Star" passenger runs. Now celebrating its 75th anniversary of service to the Southwest, the Cotton Belt has dieselized 85% of its freight operations, 90% of its switching, and 60% of its passenger service in its heads-up bid to win more traffic to the rails.

113-304

Alco GE

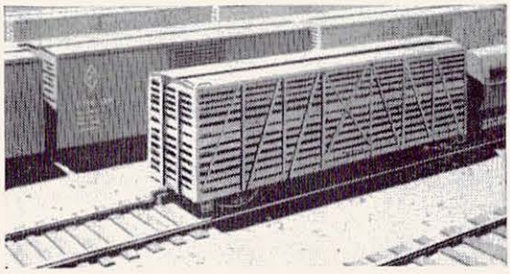
AMERICAN LOCOMOTIVE and GENERAL ELECTRIC

SCULLIN L-V 50 TRUCK
STEEL CASTINGS MANUFACTURER
NEW YORK
CHICAGO
BALTIMORE
RICHMOND, VA.
LATERAL VERTICAL
L 50 V
CUSHIONED MOTION
SCULLIN TRUCKS
THE SMOOTHEST TRAFFIC-BUILDERS
BETWEEN LCL AND YOUR RAILS
Photo Courtesy
Baltimore & Ohio Railroad
SCULLIN STEEL CO.
SAINT LOUIS 10, MISSOURI

"meet the public" on CLEAN, safe WOOD

protected with penta*

the clean wood preservative



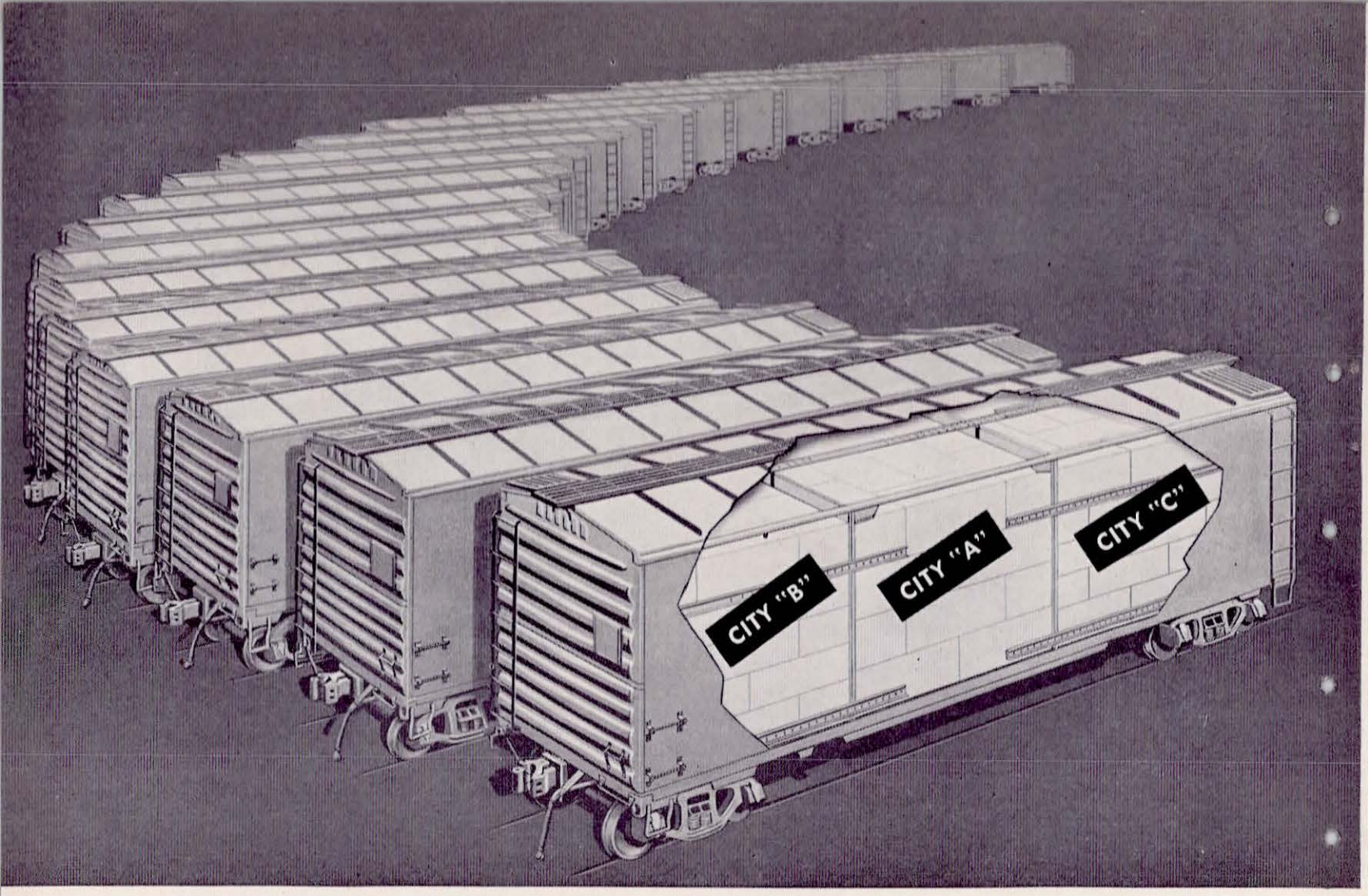
Service life goes up; maintenance cost goes down!
PENTA protection can triple the effective life of car lumber — from flat car beds to stock car bodies.

Wherever wood structures and equipment meet the public, specify treatment with PENTA, the *clean* wood preservative. On PENTA-protected crossings and platforms, they walk on wood that's light and clean, neat appearing and safe. Stations and other wood structures, too, look better and last longer, for PENTA-protected wood can be painted when properly treated.

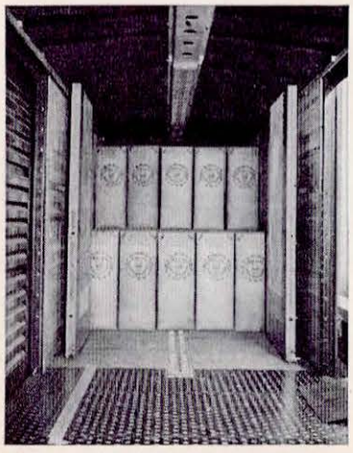
PENTA is more than surface protection—it penetrates deep into the wood to effectively resist decay and termites, make wood serve longer. These advantages are reflected in *reduced* material and labor costs for maintenance and repair, and *increased* operating efficiency. For complete information about PENTA and its application to your wood preserving problems, write Dept. PE 32.

THE DOW CHEMICAL COMPANY • *Midland, Michigan*
DOW CHEMICAL OF CANADA, LIMITED, TORONTO, CANADA

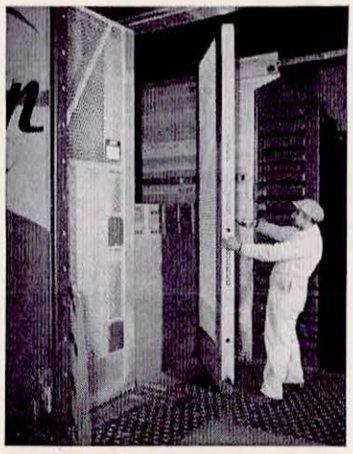
DOW
*penta
CHLOROPHENOL



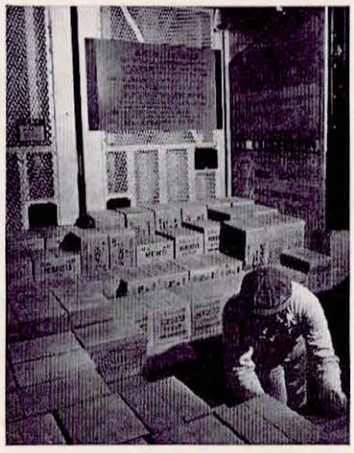
Installed, as illustrated in the cutaway model of a box car, the heavy-duty gates are carried on trolley rails for easy movement from door opening to car end providing three compartments adjustable to the size of the lading. The two locking rails on each side and one on the floor are mounted flush to protect lading. These, along with the locking rail extended down from the roof, give each pair of gates eight locking points.



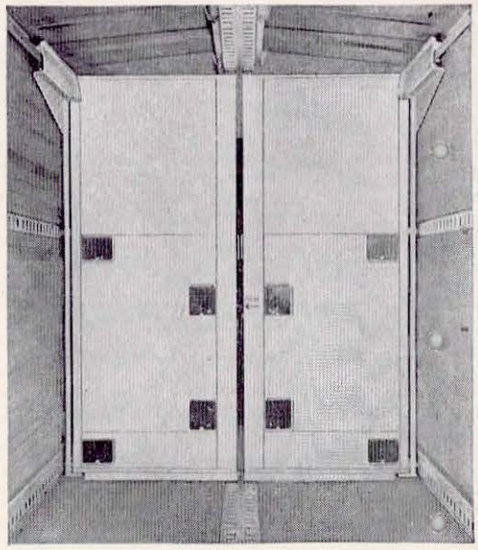
The lading is in place at one end of the freight car. The Compartmentizer is ready to be locked tightly against the shipment—top, sides, and bottom. The gates are center locked by handle mechanisms in the gate, making it easy for one man to handle the operation. The size of the compartment can be varied to fit the shippers' requirements.



Two locking bars at the pivot edge of each gate engage in holes located in metal locking strips fastened to the car side. Holes in the metal strips in the floor and at roof corresponding to those on the sides, receive the vertical locking bars. The bars can be easily and securely locked in the holes when the gate is placed in its closed position.



The center compartment is loaded. This lading can be unloaded easily at a point en route to the car's final destination. The possibility of one consignee unloading material destined for another is abolished. The Compartmentized PS-1 should not be regarded as a special purpose car, for the gates, when locked against car end, take only 4½ inches of space.



Sheet steel surfaces, replacing the wire mesh, are used in the gates of the improved Compartmentizer now being furnished by Pullman-Standard.

SUBSIDIARY OF

PULLMAN

CAR BUILDING DIVISION

79 EAST ADAMS STREET, CHICAGO 3, ILL. • BIRMINGHAM

The Western Pacific reorders

Twenty Compartmentized PS-1s have been in use on the Western Pacific for more than a year. The damage-prevention records of these box cars have proved to this railroad that the money spent for twenty more will mean further operating economies. For not only have damage claims been substantially reduced, but shipper acceptance has been extremely favorable. By eliminating the need for dunnage, thereby reducing labor costs, shippers also find that they get much greater protection for their products.

20 car sets of Compartmentizers

Besides minimizing damage claims for the railroads, the Pullman-Standard Compartmentizer increases car use and shortens turn-around time through ease of operation—just close the gates against the load and lock, a one-man operation. According to Mr. Poulterer's letter shown below, Compartmentized PS-1s gave confirmation of their worthiness on the Western Pacific for the transportation of case or crated ladings, such as bottled goods, household appliances, and canned goods. The sealed compartments enable stop-off loads to be segregated and prevent loss from errors or pilferage.

for trouble-free shipments

You can prove to yourself the money-saving advantages of the Compartmentized PS-1 by contacting your nearest Pullman-Standard office. PS-1 Freight Cars can be ordered already equipped with Compartmentizers. We can also provide the "packaged" Compartmentizer, which you can install. Or, if you wish, we will equip your present PS-1 box cars with Compartmentizers in our shops.

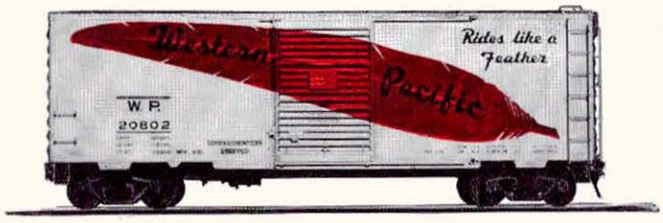
WESTERN PACIFIC

"The Western Pacific has had 20 compartmentizer PS-1s built by Pullman-Standard, in use since last Fall. The damage-prevention advantages of the compartmentizer have given us a clean record from damage claims in handling commodities such as television sets, household appliances, glassware, packaged cereals, medical supplies, and many other types of goods, especially those of a fragile nature.

"Shipper acceptance has been gratifying, for not only does the compartmentizer eliminate the need for dunnage, thereby reducing loading costs, but it also assures much better protection for their products.

"The compartmentizer is a potent factor in meeting competition of other forms of transportation, particularly where partial unloading is involved and careful handling is of prime consideration. Our records on the condition of shipments at transit point and destination have proved to our satisfaction that the compartmentized PS-1 can reduce damage claims to a minimum."

H. E. Poulterer
Vice-President-Traffic
Western Pacific Railroad



The Compartmentized PS-1 offers many advantages to both carrier and shipper. It is quick and easy to use. Standard installation, two pairs of gates to a car—one pair at each end—forms three compartments.

PULLMAN INCORPORATED
STANDARD CAR MANUFACTURING COMPANY
PITTSBURGH • NEW YORK • SAN FRANCISCO • WASHINGTON

Would you invest $200,000 to save $1,200,000?

By reducing corrosion damage in hopper cars

WHEN you can expect a three-fold to six-fold return on your money—and can be *sure* of getting it—it doesn't take much sporting blood to close the deal. It just takes a little vision.

That's why we would like to emphasize the tremendous savings in maintenance costs that hopper car construction with corrosion-resisting U·S·S COR-TEN steel has to offer.

These predicted savings, of three to six repair dollars for every extra dollar spent for COR-TEN steel, can be confidently counted upon. They are not imaginary figures. They are conservatively estimated from established facts—from results of actual performance tests made in hopper cars in which COR-TEN steel and copper steel have been tested side by side in identical coal hauling service for a period of 13½ years.

In these cars, with body sheets built half of COR-TEN steel and half of copper steel, careful measurement showed that on the average the COR-TEN steel sheets had lost *only half* as much weight and thickness as the copper steel sheets. In a similar "identical service" test which ran for 13 years, the comparative losses in weight and thickness were in substantial agreement with these findings.

Not only these results, but others like them obtained from the examination of hopper cars in service on various railroads, clearly indicate that by substantially reducing corrosion damage, U·S·S COR-TEN steel, used in place of copper steel, in the same thicknesses, will increase the life of hopper car body sheets by at least 50%.

Here's how the longer life of COR-TEN steel pays dividends

Take a 70-ton hopper car for example. Built of copper steel it costs $5400. Built of U·S·S COR-TEN steel of the same thickness throughout it would cost $5600—$200 more.

At the end of 12 years, the copper steel car on many roads would require heavy repairs at a cost of about $1600. At the end of 24 years, heavy repairs would cost an additional $1600—bringing the total cost of maintenance for the life of the car to $3200.

Figuring the life of U·S·S COR-TEN steel construction conservatively as only 50% longer, the COR-TEN steel car would require heavy repairs at the end of 18 years—at a cost of $1800—and no more would be needed.

Thus, over the 36-year normal life of each car, the cost of repair for the COR-TEN steel car would be $1400 less. Subtract from this the $200 extra cost for the original COR-TEN steel construction, and the *net* saving is $1200—a 600% return on the investment.

Projected in terms of a 1000-car order, COR-TEN steel construction at an extra cost of only $200,000, would thus save $1,200,000 in maintenance costs. These figures speak for themselves. They are worth your serious consideration. We suggest that you insert the life of hopper car sheets and the cost of repairs on your own road in the table on the opposite page to see how much you can save by using U·S·S COR-TEN steel.

USS TRADE MARKS COR-TEN STEEL UNITED STATES STEEL

UNITED STATES STEEL COMPANY, PITTSBURGH • AMERICAN STEEL & WIRE DIVISION, CLEVELAND
COLUMBIA-GENEVA STEEL DIVISION, SAN FRANCISCO • NATIONAL TUBE DIVISION, PITTSBURGH
TENNESSEE COAL & IRON DIVISION, FAIRFIELD, ALA.
UNITED STATES STEEL SUPPLY DIVISION, WAREHOUSE DISTRIBUTORS
UNITED STATES STEEL EXPORT COMPANY, NEW YORK

COR-TEN steel construction can pay off 6 to

Virginian Railway will save $2,200,000 on the 2,500 50-ton hopper cars already built with bodies of U·S·S COR-TEN steel

TYPICAL COST COMPARISON FOR 1000 70-TON HOPPER CARS USING COR-TEN STEEL AND COPPER STEEL IN AAR STANDARD THICKNESSES

CONSTRUCTION COST		Cost of heavy repairs after 12 years at $1,600 per car	Cost of heavy repairs after 18 years at $1,800 per car	Cost of heavy repairs after 24 years at $1,600 per car	Total cost of heavy repairs
Copper steel at $5,400 per car	$5,400,000	$1,600,000	.....	$1,600,000	$3,200,000
COR-TEN steel at $5,600 per car	$5,600,000	.....	$1,800,000	.....	$1,800,000

Additional cost of COR-TEN..... $ 200,000
Per Car..... $200

Total Repair Saving by COR-TEN steel	$1,400,000
Additional Cost of COR-TEN steel Construction	$ 200,000
Net Repair Saving by COR-TEN steel	$1,200,000
Net Saving per car	$ 1,200
Ratio of Net Saving to Additional Cost	600%

Note: Cost comparisons reflect steel prices in effect July 1st, 1952

Watch for Newest Symbol TM
in Railroading Today TM
TM
FIRST Universal Railroad
Motive Power Unit
TM . . . the new symbol in railroad motive power
that brings new opportunity
for greater operating efficiency.
FAIRBANKS-MORSE
a name worth remembering when you want the best
LOCOMOTIVES AND DIESEL ENGINES • RAIL CARS • ELECTRICAL MACHINERY •
PUMPS • SCALES • WATER SERVICE EQUIPMENT • HAMMER MILLS • MAGNETOS

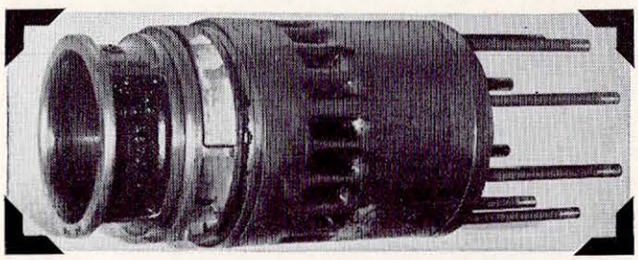
STANDARD ENGINEER'S REPORT

DATA

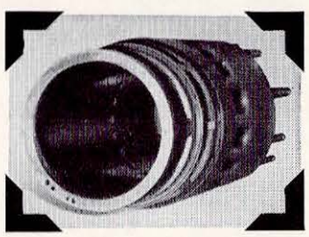
LUBRICANT	RPM Delo Oil R.R.
UNIT	Diesel locomotive — 65 to 12 gear ratio
SERVICE	Mountain log haul on grades to 3.7%
PERIOD	3½ years
LOCATION	Tacoma — Morton, Wash.
FIRM	The Milwaukee Road

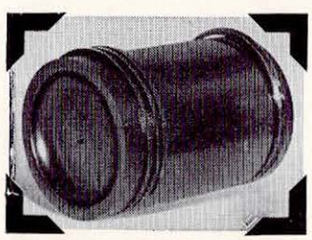
All liners, pistons still in use after 8800 hours!

LUBRICATED WITH RPM DELO OIL R.R., engines in the specially low-geared locomotive shown at right required no replacements of bearings, pistons or liners, no major repair work of any kind during 3½ years of hard service—more than 8800 hours of engine operation and 149,859 miles of locomotive travel. Geared at a ratio of 65 to 12, the locomotive hauls up to 134 carloads of logs out of the mountains on upgrades of 2.5%. Going in, upgrades reach 3.7%.



AFTER 48,800 MILES of constant service, this assembly was removed for inspection. It proved the low liner-wear rate: Top bore diameter was 8.5025, bottom 8.501—less than 0.002 out of round!





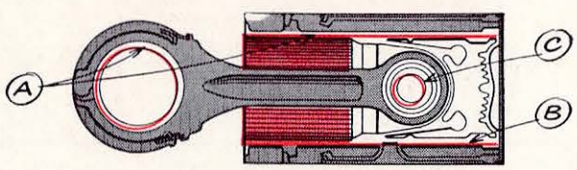
NO LACQUER DEPOSIT trouble has been encountered in the engines although they idle about 30% of the time, often in low subzero temperatures. Rings remain free, as shown in this picture.

FREE CATALOG: "How to Save Money on Equipment Operation," a new booklet full of valuable information, will be sent you on request to Standard Oil Company of California, 225 Bush St., San Francisco, Calif.

RPM DELO LUBRICATING OILS

TRADEMARK "RPM DELO" REG. U.S. PAT. OFF.

How RPM DELO Oil R.R. prevents wear, corrosion, oxidation



A. Special additive provides metal-adhesion qualities...keeps oil on parts whether hot or cold, running or idle.

B. Anti-oxidant resists deterioration of oil and formation of lacquer...prevents ring-sticking. Detergent keeps parts clean...helps prevent scuffing of cylinder walls.

C. Special compounds stop corrosion of any bushing or bearing metals and foaming in crankcase.

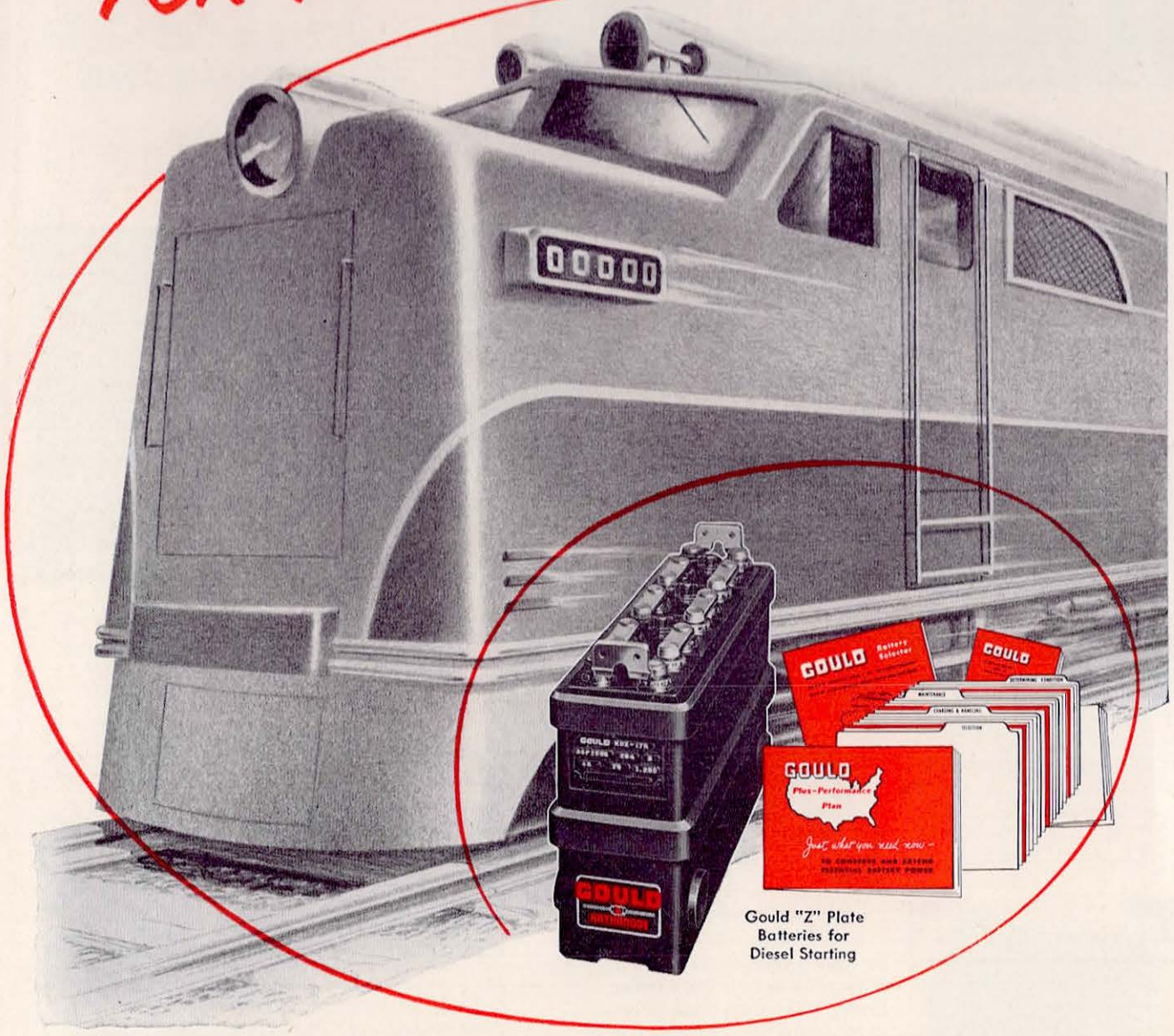
FOR MORE INFORMATION about this or other petroleum products of any kind, or the name of your nearest distributor handling them, write or call any of the companies listed below.

STANDARD OIL COMPANY OF CALIFORNIA
225 Bush Street • San Francisco 20, California

THE CALIFORNIA COMPANY
P. O. Box 780 • Denver 1, Colorado

STANDARD OIL COMPANY OF TEXAS
P. O. Box 862 • El Paso, Texas

PERFECT COMBINATION FOR FAST STARTS!



Gould "Z" Plate Batteries for Diesel Starting

You need a full-capacity, fully-charged battery to start a rugged, 2000 H.P. diesel unit, especially when the temperature is low. You can be sure of fast starts *any* time, in *any* weather by using Gould "Z" Plate Diesel Starting Batteries *and* the Gould Plus-Performance Plan to help you select, charge, maintain and determine the condition of your batteries. The library of valuable technical data comprising this plan is free to users of lead-acid starting batteries, regardless of make. Write Gould Battery Information Headquarters for details.

GOULD *Railroad Batteries*

GOULD-NATIONAL BATTERIES, INC., TRENTON 7, N. J.

Always Use Gould-National Automobile and Truck Batteries

How the Norfolk and Western fights rising costs with locomotive cranes

In earlier days, the Norfolk and Western used steam cranes to handle switch timber and everything else that's moved by grapple, hook, magnet and clamshell.

But the steam cranes were slow to get going. They had to make stops for coal and water. Their service expenses and operating costs were excessive. So the N. & W., like many another smart operator, has steadily *modernized* its crane fleet to meet the painful pinch of rising costs.

Today, with the American DiesELectric (shown above) and American Diesels, it's a different picture on the N. & W. One man runs each machine. The crane starts work at the push of a button. Fuel cost is counted in pennies per hour. Service expenses are cut, effecting substantial savings. And work output is considerably more than older type cranes could deliver.

Isn't it time for you to modernize your heavy materials-handling? You'll find the greatest savings in the cranes that out-sell all others . . . speedy, rugged Americans. Choose from Diesel and DiesELectric types; capacities from 25 to 80 tons.

2604

Modernize...economize...with

American Hoist
& Derrick Company
ST. PAUL 1, MINNESOTA

For the BIG PRODUCTION jobs of industry...

AMERICAN LOCOMOTIVE CRANES

"ONE OF THE GREATEST ADVANCEMENTS IN MODERN RAILROADING"

Budd

RDC BRINGS THEM BACK TO THE RAILS

No . . . that's not us talking. It's the railroad official who has had the longest experience of anybody, in the operation of Budd stainless steel, self-propelled RDC's. It dates from May, 1950, when the first two RDC's were placed in service by the Boston & Albany division of the New York Central.

The original schedule was two one-car round trips daily between Boston and Springfield. The service has proved so popular and profitable it is now expanded to six two-car round trips per day.

Other RDC services are between Boston and Albany, where the car cut the schedule by one hour; Pittsfield and Albany; Pittsfield and Chatham, Mass.

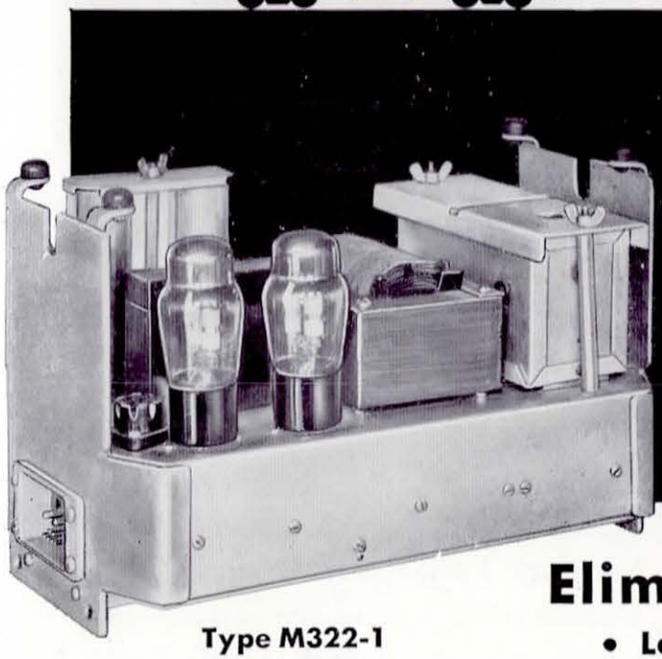
During the month of May, 1952, as compared with May, 1951, the latest figure we have, their RDC's eliminated 35,154 locomotive miles, increased service by 15,027 train miles, and reduced car miles by 102,108—about 60%.

When you increase your patronage, add service, improve schedules (and at the same time improve on-time performance), and do all these at an operating profit, this railroad official has some justification for considering Budd RDC's "one of the greatest advancements in modern railroading." The Budd Company, Philadelphia 32.

Federal-Farnsworth

"America's Pioneer BUILT-FOR-THE-PURPOSE Train Radio System"

introduces...



AN ADVANCED DESIGN

12-Volt DC

RADIO POWER SUPPLY
(Type M322-1)
for CABOOSE INSTALLATIONS

Type M322-1
RADIO POWER SUPPLY

Eliminates AC Converter!

- **Lowers Costs**
- **Reduces Maintenance**
- **Increases System Efficiency**

Federal-Farnsworth's new 12-volt DC radio power supply—M322-1—has been especially engineered to meet the fast-growing adoption of the 12-volt DC caboose electrical system by American railroads.

Outstanding features of this new power supply are elimination of AC converter . . . elimination of relay switching of power circuits . . . greater efficiency . . . more dependable system-wide performance!

The new unit employs a railroad, heavy-duty, plug-in vibrator to supply current directly to both transmitter and receiver. A plug-in filter condenser also is incorporated.

This simpler design cuts the cost per caboose installation . . . reduces maintenance to a new low with a more reliable and conservatively-rated vibrator, long-life tubes and components.

The M322-1 mounts on the same chassis with other standard plug-in type units pioneered by Federal-Farnsworth.

For complete information write to Dept. I-147

Federal-Farnsworth provides the finest in Fixed and Mobile Train Radio

- Systems designed exclusively for railroad application
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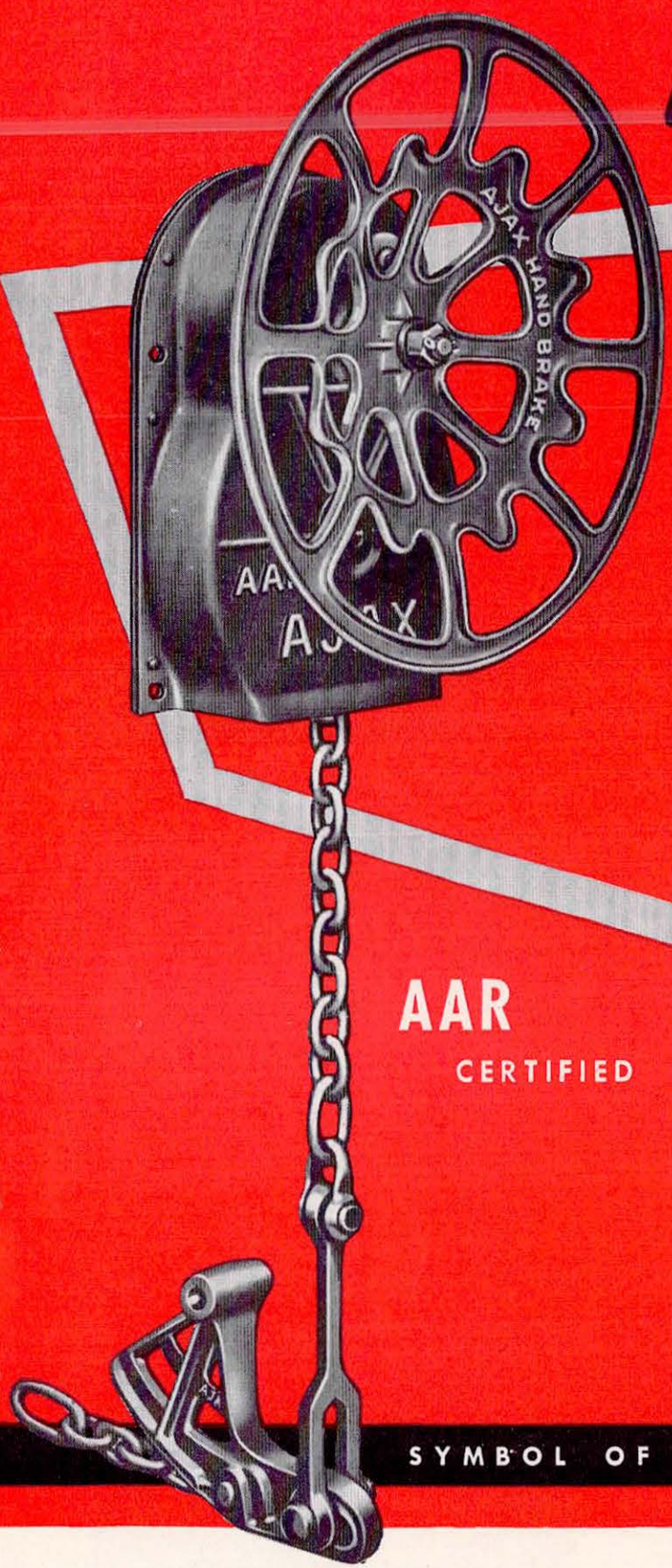

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Keep your equipment out of the shop and on the rails with Ex-Cell-O steel pins and bushings. They give from four to six times longer service than ordinary pins and bushings. The tough ductile core of Ex-Cell-O pins and bushings withstands shocks, vibration; their hard case and fine finish resist abrasive action.

52-29

Standard styles and sizes of Ex-Cell-O pins and bushings for steam, Diesel, and passenger car equipment are given in Ex-Cell-O Bulletin 32381. Write today for your free copy.

RAILROAD DIVISION

EX-CELL-O CORPORATION

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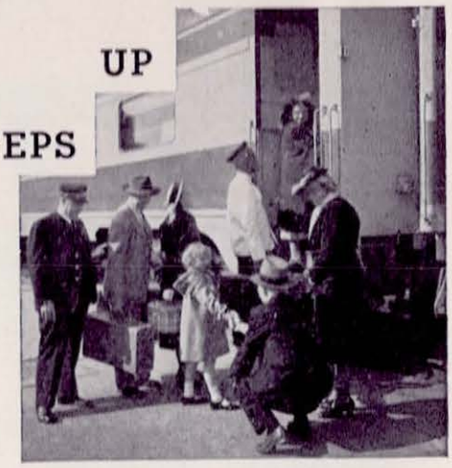

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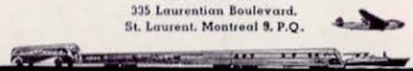

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Architectural concrete power houses are just one of more than 160 uses for concrete which enable American railroads to improve service and save time and money. The moderate first cost of such concrete improvements—plus their long life and low maintenance cost—result in *low-annual-cost* service. This saves money for other essential items.

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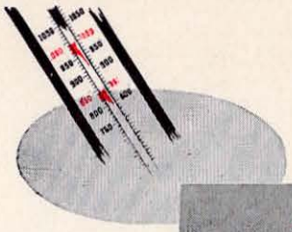

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Gun Iron maintains full tensile strength up to 850° F. Growth amounts to only ¼ of 1% in linear dimensions at 900° F. By use of alloys, these limits can be raised much higher.

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● The Rock Island's diesel powered Rocky Mountain Rocket, shown above, symbolizes the century of achievement which has earned for this railroad an enviable reputation for progressive service. A pioneer of railroad dieselization, the Rock Island has literally helped "rocket" the railroad diesel to fame.

A contributor to this railroad's outstanding record for diesel economy and efficiency is STANDARD HD Oil, Standard Oil's outstanding heavy-duty diesel lubricant. One of the first railroads to use STANDARD HD, the Rock Island has ample evidence of this lubricant's ability to provide effective lubrication.

Make this progressive railroad's acceptance of STANDARD HD the basis for trying STANDARD HD in your diesel locomotives. A Standard Oil Railway Department representative will be glad to help you. Standard Oil Company, 910 South Michigan Ave., Chicago 80, Illinois.

Rock Island

STANDARD OIL COMPANY STANDARD *(Indiana)*

New PYLE Composite Control Jumpers for Diesels

16 - 21 - 24 or 27 Poles

Individually renewable conductors pulled through hollow sheath at time of assembly. Two spare conductors included.

NOW! All the desirable features of rubber and metal combined!

Avoids costly replacements

Pyle-National's new WWPAJ Diesel Locomotive Control Jumper **combines the flexibility and resiliency of the all-rubber head jumper with the lightweight, strength and individual parts renewability of the all-metal head jumper.**

Rubber, of a compound unaffected by oil, heat and cold and possessing high arc resistance, provides: A resilient shock-absorbing face plate which withstands the most severe blows without cracking or becoming out-of-round.

A super-flexible, fabric-reinforced rubber conduit with long tapered integrally molded grommets on each end which encloses the individual conductors.

Resilient rubber sleeves which prevent abrupt flexing of leads and avoid current creepage at the wire terminals without the use of sealing compound.

Aluminum Alloy plug housing, lock cap and lock nut, in addition to reinforcing the assembly, makes complete dismantling possible for inspection, repair and replacements.

All strain is confined to the exterior components including the rubber conduit, tapered grommets and metal plug housings. No strain is imposed on the interior current carrying conductors and contacts.

Metal plug housing also includes an integral damage-proof polarizing guide lug and a positive locking seat for the receptacle cover hook.

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So don't try second bests—use only *genuine* Baldwin Diesel Parts.

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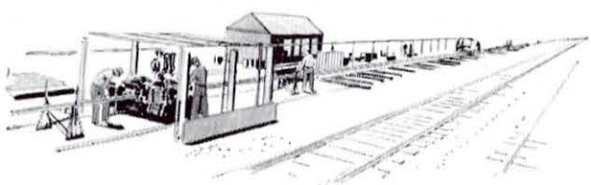
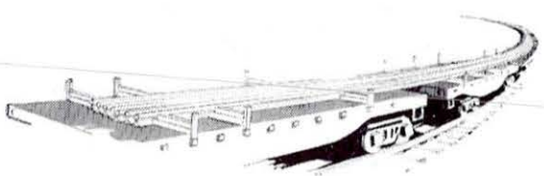
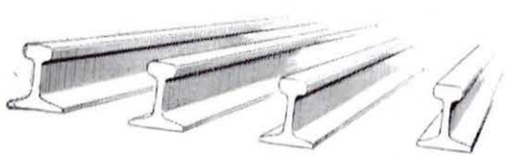
PHILADELPHIA 42, PA. • OFFICES IN PRINCIPAL CITIES

Seven convenient parts warehouses

NOW is the time to plan your 1953 Rail Welding Program







Plan now to save track maintenance dollars for the life of the rail by using continuous rail for open track, tunnels, bridges, and stations. Then call in OXWELD for RIBBONRAIL Service.

—Talk the whole plan over with an OXWELD representative. Learn how an efficient OXWELD pressure-welding unit can save your railroad thousands of dollars.

—Find out how easily an OXWELD welding setup can be located anywhere on your road.

—See how easily long rail lengths can be transported with the equipment you now have... flat cars, skid rails, or push cars and buggies.

—It's easy to get started. Simply specify in your next rail order that rail ends be undrilled, unbeveled, and unhardened. And call in OXWELD.

—We repeat, now is the time to plan 1953 track savings. Ask OXWELD to help you fit RIBBONRAIL Service into your 1953 budget.

"Oxweld" is a trade-mark, "Ribbonrail" is a service mark of Union Carbide and Carbon Corporation.

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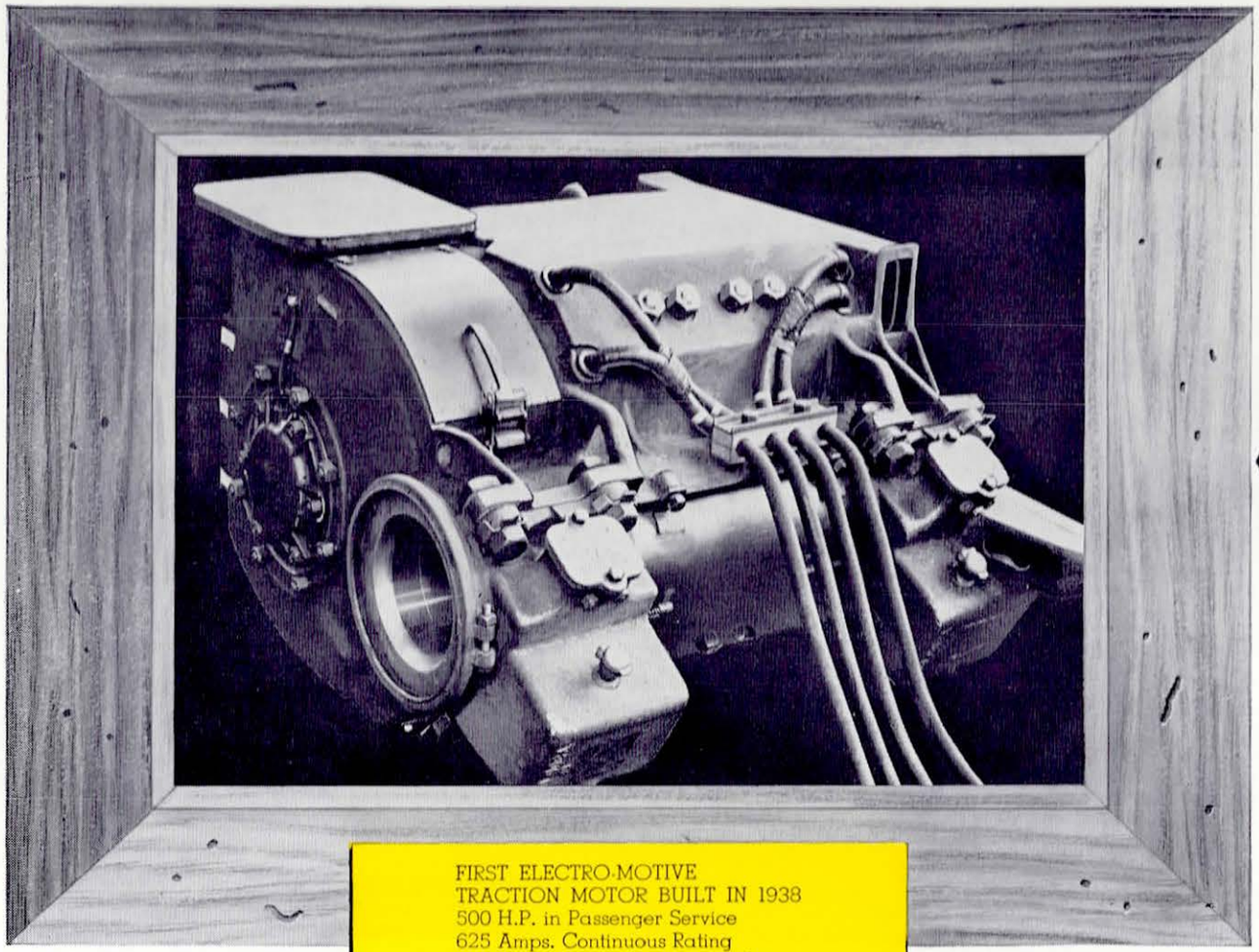
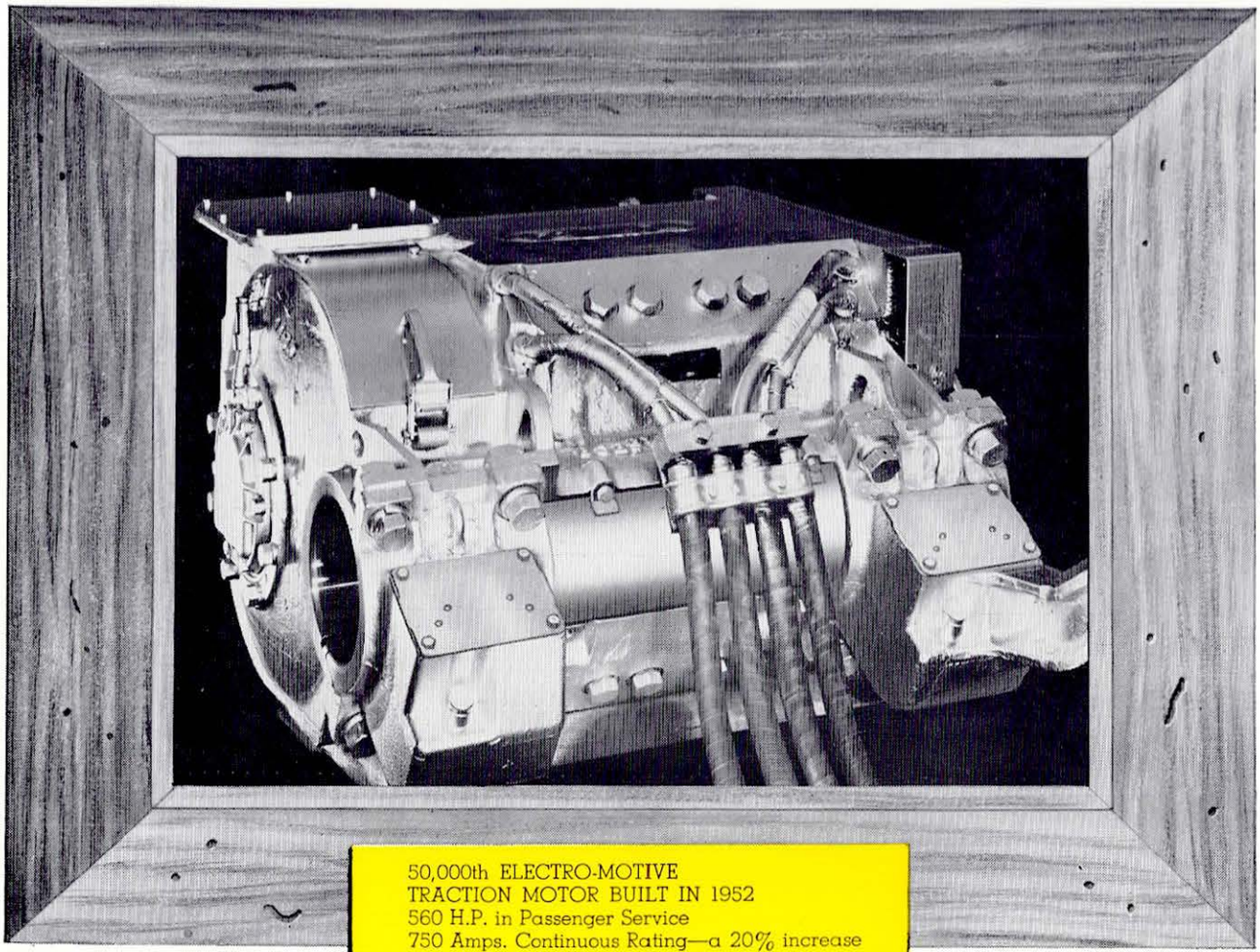


FIRST ELECTRO-MOTIVE
TRACTION MOTOR BUILT IN 1938
500 H.P. in Passenger Service
625 Amps. Continuous Rating
100,000-Mile Overhaul Interval



50,000th ELECTRO-MOTIVE
TRACTION MOTOR BUILT IN 1952
560 H.P. in Passenger Service
750 Amps. Continuous Rating—a 20% increase
300,000-Mile Overhaul Interval

THEY LOOK ALIKE

—but they're billions of miles apart

BETWEEN the building of the first Electro-Motive traction motor completed at the La Grange plant in 1938 and the fifty-thousandth unit built early this year, General Motors Diesel locomotives have covered more than 3¼-billion unit miles in all classes of railroad service.

Although today's motor looks very much like the first—and will, in fact, fit any General Motors Diesel locomotive ever built—a lot of improvements have been made through the years. Horsepower output is higher. Ratings are up 20%. The new inorganic insulation has about eight times as much life as the insulation used in the earlier motors. Recommended overhaul period has been extended to 300,000 miles, and a number of railroads are successfully experimenting with 400,000- to 500,000-mile overhaul intervals.

Pays Off in Rebuilds Too

The experience we've gained in building more than 50,000 traction motors pays off in more ways than one. This means that today's General Motors locomotives not only perform better at lower cost per mile, but also that motors rebuilt by Electro-Motive are even better than the originals.

When you use Electro-Motive's factory-rebuilding-service, you are assured that every new improvement is incorporated during the rebuilding process. Many railroads are taking advantage of this service to bring their earlier EMD traction motors up to the capacity of those now coming off the assembly line.

This "up-dating" of old equipment is one of the many reasons why it pays to send traction motors, generators, engines, injectors and other components to Electro-Motive for rebuilding. Production-line methods and volume efficiencies assure lowest costs, as you will see by checking our published flat-rate charges. And, remember, *every unit rebuilt by Electro-Motive* (whether Unit Exchange or Rebuild-and-Return) *carries the same guarantee as a new assembly!*

ELECTRO-MOTIVE DIVISION
GENERAL MOTORS

La Grange, Illinois • Home of the Diesel Locomotive

In Canada: GENERAL MOTORS DIESEL, LTD., London, Ontario

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Coming January 12, 1953

Annual Review and Outlook Number

This issue will provide the first authoritative report of the year's railway operations—including the comprehensive review by Dr. J. H. Parmelee, vice president and director, Bureau of Railway Economics, Association of American Railroads. Its outlook information and statistical summaries further emphasize the value of this important record, which is widely sought and used throughout railway, business and financial circles the world over. Manufacturers should plan their advertisement in ample time to meet the December 22 closing date.

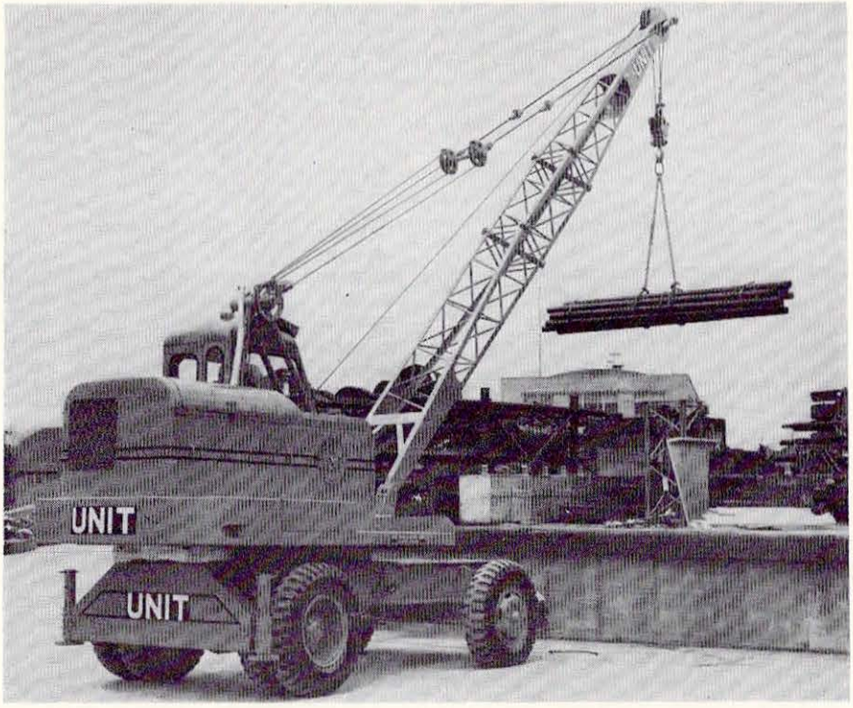
RAILWAY AGE

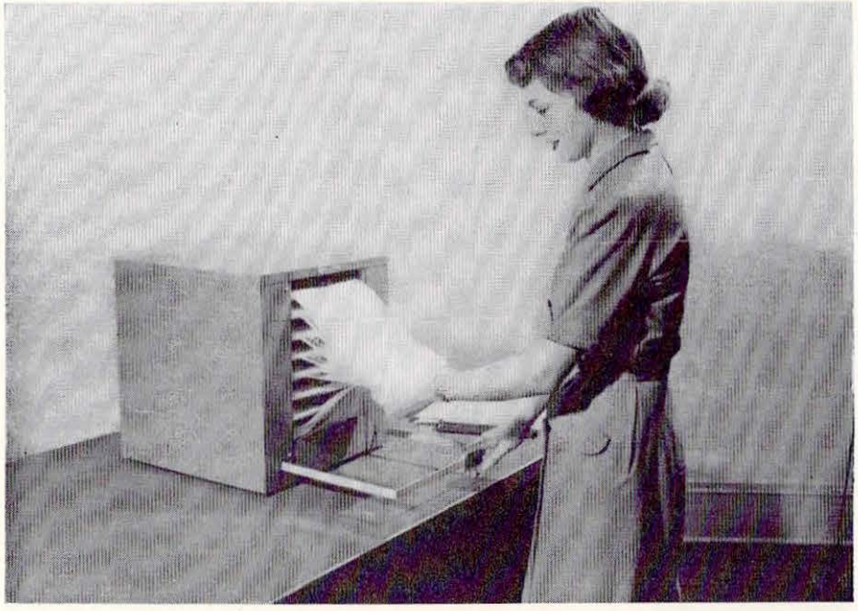
One of a series of advertisements prepared by THE ASSOCIATED BUSINESS PUBLICATIONS

Cranes Equipped with Fluid Drive

Application of fluid torque drive as a standard installation on their ½-yd. crawler and mobile machines has been announced by the Unit Crane & Shovel Corp., of Milwaukee. The installation is said to accomplish smoother load handling with greater work output without increasing fuel consumption. The installation still retains the method Unit has always applied of mounting the engine "straight-in-line" with the main machinery. The fact that it is connected to a worm-driven power take-off by means of a chain coupling eliminates the engine clutch and its lever system.

The installation, which has been thoroughly field tested in all operations as a shovel trencher, clamshell, dragline, etc., consists of a 6-cylinder Industrial gasoline engine and Chrysler torque converter.



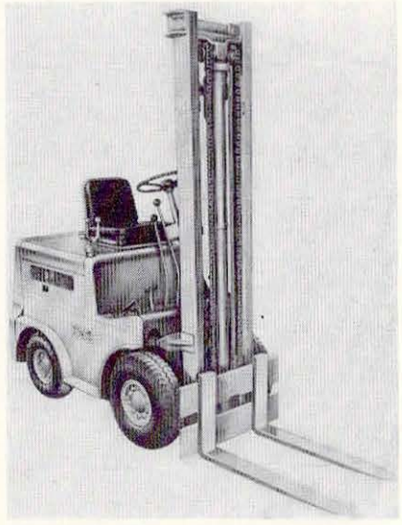


A mechanical collator, available in five- or eight-bin models, has just been announced by the Thomas Mechanical Collator Corporation, 30 Church street, New York 7. As the operator pulls on the bar, shown in the illustration, sets of two to eight pages are gathered together in one single operation. The unit is 15½ in. square, and can accommodate all paper sizes from 3½ in. by 8 in. to 8½ in. by 14 in.

Improved 2,000-lb. Fork Truck Announced by Clark Equipment

Several important improvements have been incorporated in the Yard Lift 2,000-lb. capacity pneumatic-tired fork lift truck produced by the Clark Equipment Company, Battle Creek, Mich.

Smoother tilt action and upright stability are provided by twin double acting tilt cylinders, which replace the single cylinder formerly used. Piston-type construction with honed cylinder surfaces minimizes leakage and maintenance on the new units. The instrument panel on the new model—which includes all recording dials, ignition switch and starter button—is positioned for easy reach and best visibility. The quick-change clutch and Elliott-type steering axle, which are standard on most larger models, are now included on this smaller unit.



Clark's new Yard Lift "20."

NOW! Get the Book That Protects the Money You Invest in Diesels

DIESEL-ELECTRIC LOCOMOTIVE HANDBOOK

By GEORGE F. McGOWAN Technical Consultant

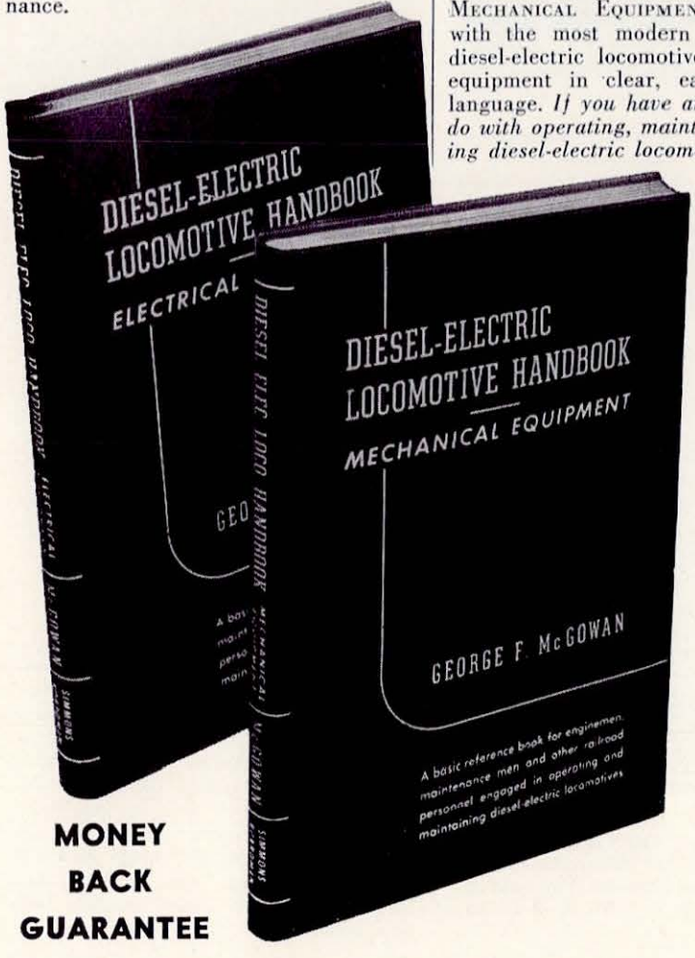
SEND TODAY for this great new book! Packed with photos and diagrams, it brings you up-to-the-minute facts — *the latest available* on diesel-electric locomotives and equipment.

Here is everything you need and want to know—*written from the viewpoints of the men in the cab and the shop*—by an experienced railroad man—*all checked and approved by the leading locomotive builders.*

For your convenience this handbook is sold separately in two volumes: *Mechanical Equipment and Electrical Equipment.* Read the descriptions that follow and you'll agree: *Here is essential information you cannot afford to be without!*

MECHANICAL EQUIPMENT

Everything necessary to complete understanding of diesel-electric locomotives is included—how diesel-electric locomotives are constructed, the reasons behind their design, proper operating methods, things that can go wrong with them, "trouble-shooting," and effective servicing and maintenance.


DIESEL-ELECTRIC LOCOMOTIVE HANDBOOK
ELECTRICAL
DIESEL-ELECTRIC LOCOMOTIVE HANDBOOK
MECHANICAL EQUIPMENT
GEORGE F. McGOWAN
A basic reference book for enginemen, maintenance men and other railroad personnel engaged in operating and maintaining diesel-electric locomotives.

MONEY BACK GUARANTEE

GIVES YOU DETAILS OF EACH PART

Among the chapters are: The Development of the Diesel-Electric Locomotive; Fundamentals; Lubricating and Cooling; Fuel System—Fuel; Pistons, Piston Rings, Liners; Connecting Rods, Bearings, Crankshafts; Valves, Timing, Heads; Governors, The Steam Generator; The Air Compressor; and The Gas Turbine Locomotive.

DESCRIBES LOCOMOTIVES BY MAKE

Separate chapters are devoted to accounts of diesel engines made by The American Locomotive Company, Baldwin Locomotive Company, Electric-Motive Diesel, Fairbanks, Morse & Company, and Lima-Hamilton Corporation. Each engine, its parts, and its non-electrical auxiliaries are described and illustrated in full detail.

SOLVES JOB PROBLEMS FOR YOU

MECHANICAL EQUIPMENT provides you with the most modern information on diesel-electric locomotives and auxiliary equipment in clear, easy-to-understand language. *If you have anything at all to do with operating, maintaining or servicing diesel-electric locomotives,* you'll use this book as a handbook to help you solve problems that you meet in your daily work, and as a reference to keep you on top of developments in this expanding field.

ELECTRICAL EQUIPMENT

You get full descriptions of all major pieces of electrical equipment and all their parts: how they are constructed, how to operate them, how to take care of them and how to fix them if they go wrong.

There are chapters on: The Electric Generator; The Traction Motor; Exciters, Auxiliary Generators, Motor Blowers, Dynamic Braking; Batteries; and Contactors.

DETAILS EQUIPMENT BY MAKE

The electrical and control equipment of the major builders: Alco-G.E., Electro-Motive Division, Lima-Westinghouse, Baldwin-Westinghouse, and Fairbanks, Morse-Westinghouse is completely analyzed in individual chapters.

You need only a layman's knowledge of electricity to gain the utmost benefit from this book—because the subject is presented in *practical language* by an experienced railroad engineer.

ANALYZES ELECTRICAL SET-UP

You learn why the electrical transmission has been adapted to the diesel locomotive; its advantages, disadvantages and limitations. You get a review of electrical fundamentals; definitions of terms and explanations of how to use the most common electrical formulas. Schematic wiring diagrams are explained and their special symbols identified.

EXPLAINS OPERATION, SERVICING, MAINTENANCE

Yes, *here is your opportunity to gain a complete understanding of the electrical equipment of today's diesel-electric locomotives,* to learn how to handle, service and maintain the equipment.

GUARANTEED ORDER FORM

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Enclosed find ..... for the book(s) checked below. I understand that you will ship them to me postpaid, and that if I am not completely satisfied I may return them any time within 10 days of receipt for a full refund of my money.

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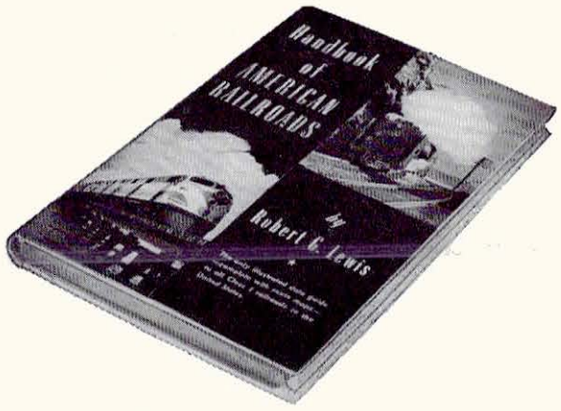

Official Facts, Figures, Photos and Maps of Every Class I Railroad in the U. S.

HANDBOOK
of
AMERICAN RAILROADS

by ROBERT G. LEWIS

Transportation Editor, *Railway Age*

How many diesels has the Chicago, Burlington & Quincy? . . . When was the Gulf, Mobile & Ohio started? . . . Who is president of the St. Louis-San Francisco? *Handbook of American Railroads* supplies you with these and tens of thousands of other answers.

For Each of 127 Railroads, HANDBOOK OF AMERICAN RAILROADS bring you:

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8. Many Other Highly interesting Statistics Collected Here for the First Time

Now you can get—for the first time under one cover—official up-to-date facts on 127 Class I railroads. Specially-drawn maps show the route of each road. Beautiful action photos of crack trains such as Twin Cities Zephyr, The Red River, The Inter-City Limited, and dozens more fill the book.

This means convenience for the railroad executive, fun for the railfan, and—for everyone concerned with railroads—a tremendous gain in railroad knowledge that only a vast accumulation of facts like this makes possible.

265 p. 5½ x 8½ 375 ill. board $2.95

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Railway Age, Dept. 1110 52
30 Church St., New York 7, N. Y.

Please send me for Free examination a copy of the HANDBOOK OF AMERICAN RAILROADS. If after 10 days I am not completely satisfied, I will return the book and owe nothing. Otherwise, I will remit the price of $2.95 plus a few cents for postage and handling.

Name .....

Street .....

City, State .....

Benchmarks and Yardsticks

THE PRESIDENT of a large railroad—who is still young enough to look forward to a good many years of active railroading—sees the "railroad problem" this way: "To live and prosper, we've got to get fairer competitive conditions and some changes in regulation, but to bring about these changes, we'll have to have the public with us. They'll not be with us unless we give them the best service we're capable of. I believe, therefore, that our No. 1 problem is to improve our service—and keep it to a high standard. That is the necessary first step, without which the results we're so eager for are not going to come."

This point of view is called to mind by extensive correspondence we've had with a retired but still active railroad officer—who has the time and opportunity to observe how railroad contacts with local business interests are being handled in his area. As a loyal railroader, he isn't altogether happy with what he sees.

For one thing, adverse decisions regarding service improvements local interests want, are made at headquarters—a long way off. Perhaps the reasons are compelling, but the important point is to bring that realization to local patrons—which perhaps could be done better in an across-the-table discussion with the patrons by the officer who will do the deciding.

Another disturbing item our friend notes has been the absence of the railroad's local agent in discussions between its higher officers and leading local patrons. Wouldn't the local agent be a more effective representative if he were given this recognition by management?

Isn't it a fact that one of the strong competitive advantages that truckers have is that there are so many trucking companies and so many "top bosses"—each with the power to make quick decisions in a patron's favor, if that's necessary to get his business? On a railroad the "top men" are few in number—and unless there's a generous delegation of authority down the line, the patron is confronted with two conditions adverse to railroad popularity: (1) Delay in getting a "yes" or "no"; and (2) decisions made at a remote point by those unfamiliar with local conditions.

The railroads are rightly seeking a relaxation in the regulation which often ties their hands in meeting the give and take of the competitive situation in transportation. Probably one of the most effective arguments for securing this greater freedom would be their maximum exercise of such freedom as now exists, with assurance to patrons that further freedom would be similarly and liberally used to their advantage.

J. G. L.

4 REASONS *why* OKONITE *Signal and Control cables give you* **EXTRA** *circuit security*

For control circuits to switch machines, switch circuit controllers, point detectors, train stop mechanisms, and other critical traffic control circuits, only the best electrical cable is good enough.

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WHAT THE RAILROADS NEED CALLS FOR A LOT OF HARD SELLING

The railroads stand alone, among the entire company of the nation's economic enterprises, in being restrained by law and regulation from getting any benefit from the "seven fat years" which have ensued since the end of World War II. In a desperate effort, especially during the past year, to arouse public support for some relief from their starved condition—before the fat years end, to be followed by the inevitable lean ones—the industry is pursuing the common-sense course of concentrating, first, upon measures against which there is a minimum of opposition.

Wide Areas of Agreement . . .

In principle, at least, neither the patrons of the railways nor the competing agencies of transportation oppose a quicker adjustment of railroad rates to inflationary increases in costs—and organized railway patrons do not oppose modifying the rate-making rule of the Interstate Commerce Act, to relieve the I.C.C. from considering "the effect of rates on the movement of traffic." There is, also, no formal opposition from parties at interest to a proposal to permit I.C.C. intervention when state authorities delay unduly in allowing interstate rate increases to become effective intrastate; or when state authorities refuse to permit abandonment of unprofitable services.

There seems also to exist little opposition from interested parties to a proposal that parcel post rates (competing with railroad-owned express service) be made compensatory, and that the "commodities clause" be repealed. There appears to be a heartening degree of agreement among most of the agencies of transportation (except inland waterway carriers) on the *principle* of compensatory payment for the use of publicly owned transport plant. Doubtless some differences would arise in putting this principle into practice.

The best source of evidence on the degree of agreement or lack of it, among interested parties, to proposed anti-socialization changes in the transportation statutes is set forth in the volume, "Sound Transportation for the National Welfare," which is a report of the Policy Board of the Transportation Association of America, reviewed in these pages in our June 2 issue, page 95. This book is somewhat like a matron nearing the end of her prime—not so much to look at perhaps, but full of wisdom and sound information, and a great deal of virtue too. It isn't a quickie exposition that can be read on the run—but is the kind of volume more speakers, themselves, could profitably read and inwardly digest for the purpose of making their utterances more instructive.

. . . But Lots of Disagreement, Too

This report makes it clear that there is enough agreement on the several subjects mentioned above so that, selecting among them, the railroads ought to find it possible to go to the coming Congress with a few proposals which would help them considerably, while arousing a minimum of organized opposition. Probably that's what the railroads intend to do—but it would be too bad if they should stop there. Because the fact is that some proposals which are badly needed by the railroads are still controversial; and the effort needs to be made to take these projects out of the controversial category. Only intensive educational effort can do that.

What are these proposals—necessary if the railroads are to have a reasonable opportunity to prosper, but to which opposition still persists? Well, for one, there's

our time-honored friend—repeal of the long-and-short haul clause. It beats all get-out how there can be people who complain about government interference in economic affairs, but who still insist that the railroads be chained to the rock like Prometheus by this clause.

Then there's publicity for, and adherence to, the actual rates charged by contract carriers; and removal of exemption from regulation of distant-market hauling of agricultural products. And, in addition, there's "integration" of carriers—that is, giving one form of transportation greater freedom to own and operate other forms.

Parties at interest are a long way from agreeing on these last-named proposals. Nevertheless, restraints on the railroads in these areas are not compatible with the public interest; and educational effort ought to go on until the opposition is won over, or overwhelmed. It may be that the railroads would make more headway in overcoming their regulatory handicaps in meeting the rivalry of contract and "exempt" carriers if, instead of just proposing some restraints on these carriers, they would propose as an alternative that the railroads be permitted complete freedom in meeting this competition. The opponents of equality in transportation regulation make a superficially attractive case when they can say that "the railroads are trying to shackle their competitors." An offer by the railroads to accept competitive equality with contract and "exempt" carriers by getting completely unshackled in competing with such carriers would deprive their opponents of their attractive argument.

One question which never seems to receive adequate consideration anywhere is the public interest in common carrier service. The common carriers themselves do little educational work in behalf of this important function, so it's little wonder that the public discerns small harm to itself in the pushing around the common carriers are getting. The common carriers in urban passenger transportation did such a belated job in this sector that, now, a good many of them are out of business, or are socialized.

In sum, the early prospects seem encouraging for some degree of railroad relief from politically enforced poverty, given continued hard work and continued harmony among the allies. But really comprehensive restoration of transportation to the relative degree of freedom enjoyed by other business is going to take a lot more educational effort, over a period of several years at least. The public isn't going to get this education unless railroad people, themselves, get it first; and the number of railroad men who, as yet, are really proficient in this area is by no means impressive.

HOT BOXES DUE TO HIGH BEARING PRESSURES

It has long been recognized that one of the mechanical conditions primarily responsible for hot journal bearings is the prevalence of high unit bearing pressures, such as occur when cars are heavily loaded, and especially when such loads are carried on one or more journals worn nearly to the limit and possibly as much as 9/32 in. smaller in radius than newly applied brasses. Under this condition of maximum difference in size, the contact between brass and journal is practically a line bearing, with little area, and pressures per square inch are entirely too high for adequate lubrication. As a matter of fact this line contact doesn't last very long, for the softer lining metal of the bearing soon shapes itself more or less to the steel journal. Doesn't it seem obvious, however, that the wearing-in process takes longer with worn or undersized journals, so that temperatures are stepped up and the likelihood of lubrication failures are increased?

This point was especially stressed by the president of the Car Department Officers' Association in summing up discussion of the highly pertinent car lubrication report at the recent annual meeting in Chicago. To illustrate the need for some prompt and effective action in hot-box prevention, the case was cited of one railroad which experienced an increase of 22.5 per cent in hot journals in June, July and August 1952, over the same period in 1951, in spite of a decrease of 11.1 per cent in cars handled. In support of the specific argument that high unit bearing pressures are a leading cause, a study of 213 lubrication failures involving the removal of wheels due to cut journals in June and July 1952, showed that 95.3 per cent occurred with undersized journals and probably inadequate contact bearing surface.

Seven of those failures happened within two days after application of new journal bearings.

The comment is also heard that lubrication difficulties seldom reach epidemic proportions with new cars, a substantial proportion of which are generally equipped with new full-size axles. Still further evidence is afforded by the reported statement of oil experts that car oil now in general use does not necessarily disintegrate, but the film will separate when pressures are 1,000 lb. per sq. in. or over.

What is the solution? It was suggested at the C.D.O.A. meeting that this particular phase of the hot-box problem be made an A.A.R. research project, and corrective action taken to assure application of bearing brasses which conform more closely to actual journal diameter. If this involves a little more care and expense in procurement, selection and application of proper bearings, it will apparently be a small price to pay for fewer lubrication failures, attendant reduction in train operating costs, and improvement in railway service.

Unveiling of the yard sign, atop the diesel shop, marked the official dedication of the yard.

Southern Dedicates New Yard at Birmingham

The Southern's new $10 million classification yard near Birmingham, Ala., was formally dedicated and christened Ernest Norris Yard on October 29.

Ernest E. Norris, retired president of the Southern, for whom the yard is named, was on hand to participate in the dedication ceremonies. The Southern's president, Harry A. DeButts, presided, and the dedicatory address was delivered by Hugh Morrow, a director of the road, who is also chairman of the board of the Sloss-Sheffield Steel & Iron Division of the U. S. Pipe & Foundry Co.

The Southern's guests for the occasion included its directors, the system general chairmen of unions representing its employees, and more than 300 business and civic leaders, mostly from the Birmingham area. The guests were taken on a tour of the yard in low-side gondola cars which had been fitted with seats and loudspeakers.

The "barker" on the tour, which also covered railroad and industrial facilities on the route from Birmingham passenger station to the yard, was George A. Mattison, Jr., president of the Woodstock Slag Corporation of Birmingham. In the formal dedication Mr. Morrow said the yard "stands as a monument to Mr. Norris' vision, leadership and courage." He also called Mr. Norris "a man with a warm heart and a big brain"—one who "stands out like a lofty peak in the mountain range of railroad executives."

Mr. Norris spoke but briefly—to say "Thank you and God bless you."

The Southern's magazine, Ties, outlined the road's purpose in building the new yard in these terms:

"For shippers it means that the Southern backs up its slogan 'The Southern Serves the South' with all the best and most modern facilities that it can earn the money to pay for.

"For the South it is assurance that industrial and business expansion in the territory served by the Southern will not be limited in any way by lack of the best possible railroad service.

"For the nation it is a major Southern improvement of critical importance in the handling of defense traffic in one of the country's great industrial areas.

"For the nation, too, it is a major contribution toward meeting transportation needs of an expanding civilian economy.

"For the men and women who work for the Southern Railway System it's about ten-million dollars' worth of job insurance."

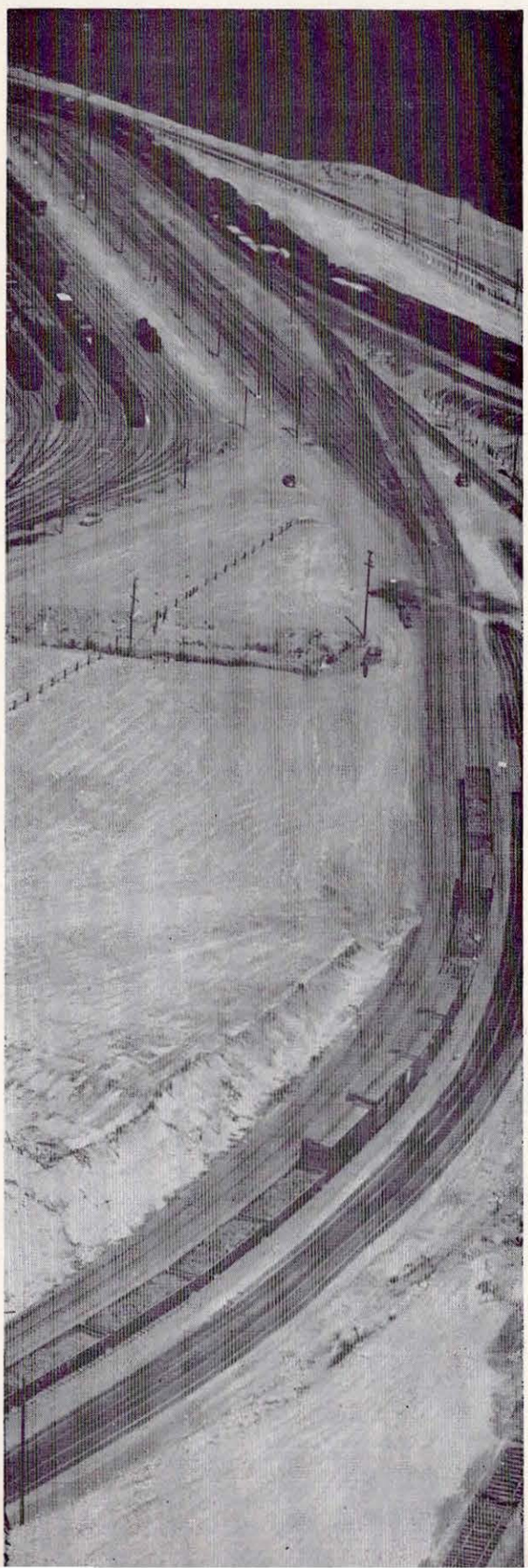
(Left) President DeButts, who presided at the dedicatory ceremonies, delivers his address of welcome to the guests. (Center) Hugh Morrow, a director of the Southern, delivered the dedicatory address, calling the yard a monument to Mr. Norris' "vision, leadership and courage." (Right) Before unveiling the yard sign Mr. Norris spoke briefly to say "Thank you and God Bless You."

The Southern's Ernest Norris Yard

. . . Another Major Freight Facility for the South

Aerial view of the hump and 56-track classification yard. The center of operations is the yard office building (center foreground) with its six-story tower. The retarder control tower is at the left of the group retarders.

Equipped with the latest devices and communications, this new $10-million freight terminal will easily handle the growing transportation needs of the Birmingham area



After more than 21 months of construction work, the Southern has formally marked the completion of Ernest Norris yard, described as the largest modern railway freight classification and forwarding yard in the South.

Built at a cost of approximately $10 million, Ernest Norris yard is located about six miles north of downtown Birmingham, Ala., and extends for a distance of about four miles in a fork between the road's Birmingham Division main line to Atlanta, Ga., and the Alabama Great Southern main line to Chattanooga, Tenn. Placed in operation on September 9, 1952, the new terminal is the newest and largest of a series of extensive yard improvements made by the Southern to reduce to a minimum the time lost by cars in yards and terminals. Because of the modern facilities incorporated in its design, the yard is expected to save many hours in the time of each car handled through it.

Birmingham is the hub for several of the road's lines. About 24 per cent of all cars inbound to Birmingham come in from the southwest on the New Orleans-Meridian line; about 20 per cent from the north (Chattanooga and beyond); about 18 per cent from the east (Atlanta and beyond); approximately 10 per cent from the west over the Columbus, Miss., and Sheffield lines; about 9 per cent from the south over the Mobile division; and about 19 per cent originate in Birmingham and from connections there. Outbound traffic generally follows the same pattern.

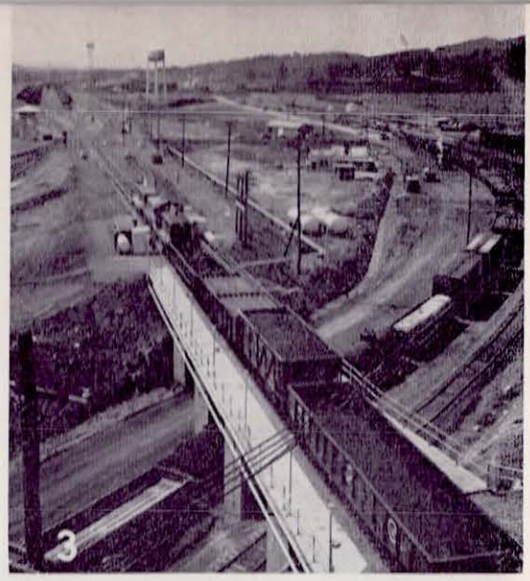
Terminal Is Completely New

The new terminal consists of a 14-track receiving yard, with two of the tracks to be used as thoroughfares; a 56-track gravity-retarder classification yard; a car-repair yard containing six tracks; a 14-track local yard; and a variety of yard towers and buildings, including stock pens, refrigerator-car icing facilities, a storehouse, a diesel shop, and diesel servicing facilities. The classification yard is equipped with automatically operated car retarders and switches and communication systems completely covering all operations.

The receiving yard is the southerly component (see diagram) of the terminal. Six of its 12 train tracks each have a capacity of from 37 to 61 cars, including engine and caboose, and the other six will hold from 136 to 146 cars, engine and caboose each, making a total capacity of 1,150 cars for this yard. Trains from the north and east will enter at its south end. Trains of cars are pushed north from this yard over the lead to the hump crest, passing a dragging-equipment detector, an automatic journal-oiling device, an inspection pit where car inspectors examine brake rigging and running gear, a station where a man with an air gun wedges coupler knuckles in the "open" position, and the hump conductor's office at the apex of the grade.

From this point, the hump lead descends for a short distance on a 3-per cent grade on which is situated the primary retarder, 149 ft. long; then, for further short distances on 1.42-per cent, 1.35-per cent, and 0.8-per cent grades to a 0.2-per cent grade for the body tracks of the classification yard. The hump lead fans out into seven track groupings of eight tracks each to form the 56-track classification yard. Seven 99-ft. retarders, one for each track grouping, are located on the individual leads to these groupings. The classification tracks will hold from 27 to 65 cars each, giving this yard a total capacity of 2,533 cars.

The control console for operating the automatic switch machines at the east end of the classification yard is in



1. At both ends of the receiving yard are track indicator signals (right) to display the number of the track the incoming train is to occupy. Across the road is the south-end yard clerk's tower. 2. As the caboose of an incoming train eases past the yard clerk's tower, the conductor deposits his waybills in the basket (left), which is hoisted up to the tower for transmittal to the yard office via pneumatic tube. 3. Trains are pushed from the receiving yard toward the hump (out of view), passing over a concrete-slab bridge on concrete piers, which carries the hump track over two other tracks and a service roadway. 4. On their way to the crest of the grade, cars being

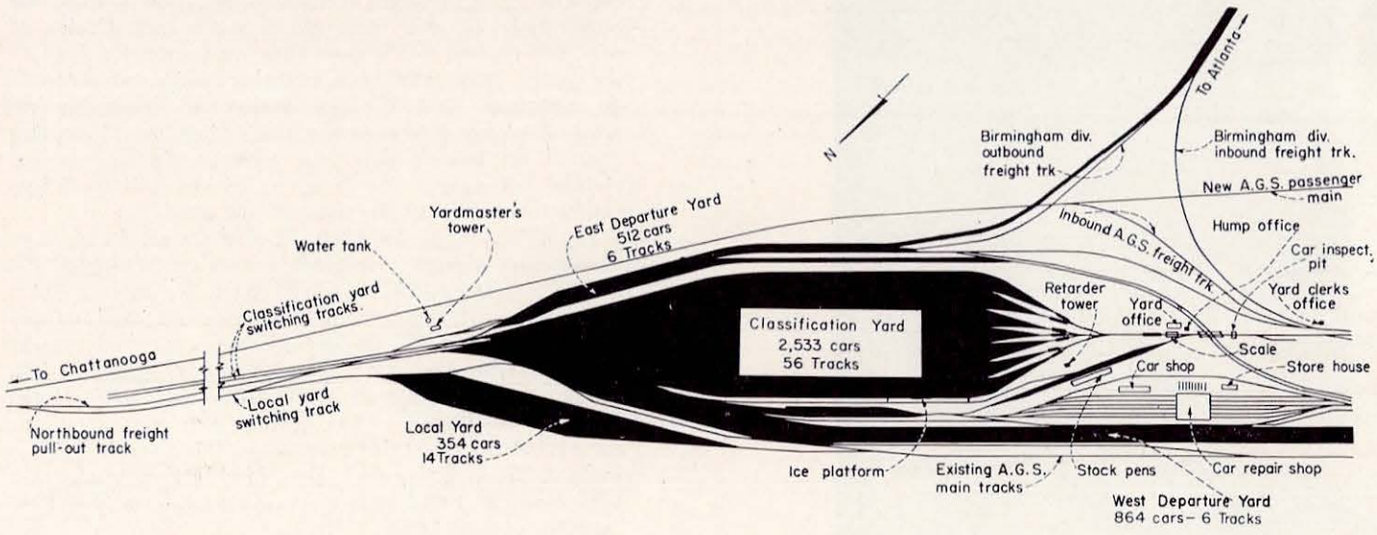
the hump conductor's office. The retarders are controlled by one operator from a control tower adjacent to the seven retarder groupings.

The yard office building stands near the crest of the hump and is the center of operations of Ernest Norris yard. From a vantage point in a six-story tower, the person on duty can see and direct the work. The building is air-conditioned and houses a number of offices including that of the superintendent of terminals, a telegraph operator who keeps posted on the arrival and departure of trains, the crew dispatcher, and clerks who keep a check on all inbound and outbound cars. As the cars move over the track scale at the crest of the hump, a clerk records the weights of the cars that are weighed and sorts the waybills representing all the various cars in a circular file having pockets numbered to correspond with the numbers of the classification tracks. Also, waybills are collected for outgoing trains in the yard office building and other paper work involved in yard operations is performed here.

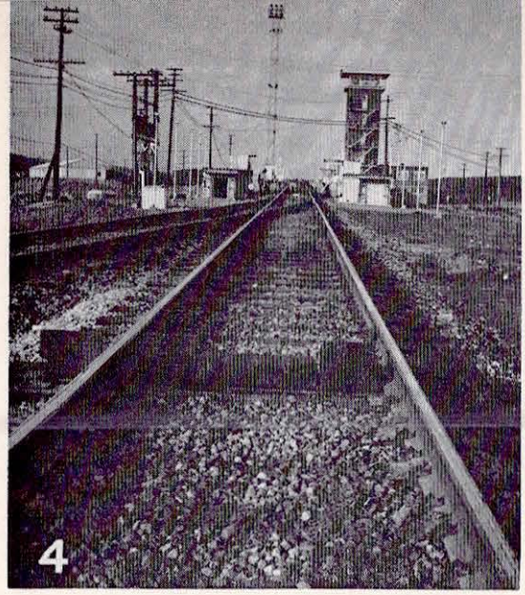
For cars that cannot be humped, such as stock cars and those containing explosives, there is a turnout located in advance of the hump crest for diverting such cars to set-out tracks and stock pens lying west of the hump across from the main yard office and the tower. Beyond these is the repair yard where running repairs can be made to cars that the inspectors discover to be in bad order. The repair yard has concrete platforms extending throughout the working area. It has an overhead crane, air-driven jacks, power tools and a stock of wheels and parts.

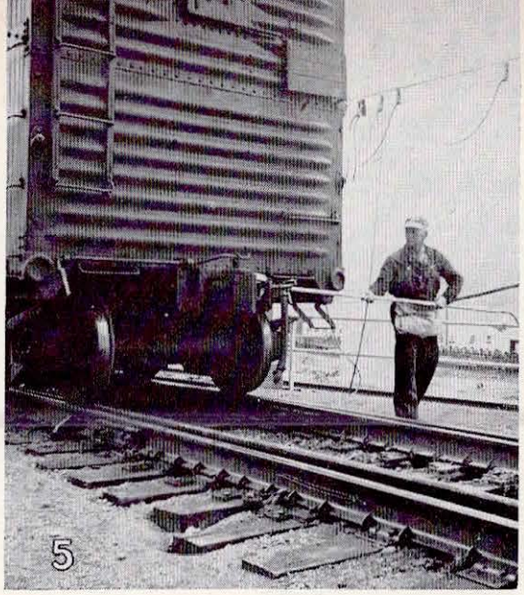
To make up trains for outbound movement, cars are pulled from the north end of the classification yard over two converging ladder tracks onto two long switching leads, whence they are switched into one of three forwarding yards. Two of these are for making up trains destined to points beyond the Birmingham district and are known as the East and West departure yards, respectively. The third, called the Local yard, is where local freights are flat switched into station order and also for making up trains or cuts of cars for the Birmingham district.

The West departure yard is situated (see diagram) between the old AGS main track on the west and the classification and receiving yards on the east. It has six tracks with capacities ranging from 128 to 167 cars, including engine and caboose, giving this yard a total capacity of 864 cars. From this yard trains will nor-



Diagrammatic plan of the Southern's new Ernest Norris yard at Birmingham, which is the latest of a series of yard improvements undertaken by the road. The new yard has a capacity beyond the immediate needs to provide for





switched pass over a dragging-equipment detector, a car-inspection pit, and past an automatic journal oiling station. 5. Immediately beyond the hump crest, a carman, equipped with a compressed-air gun, shoots a small peg in the coupler to hold the knuckle open. This assures proper coupling when the car engages another in the classification yard. 6. The yardmaster in an office at the north end of the classification yard can communicate over paging and talkback speakers with personnel in all parts of the forwarding yards as well as in the north end of the classification yard. The box on the left of his desk is a track-clearance indicator.

mally be dispatched to the north and to points south and west beyond Birmingham.

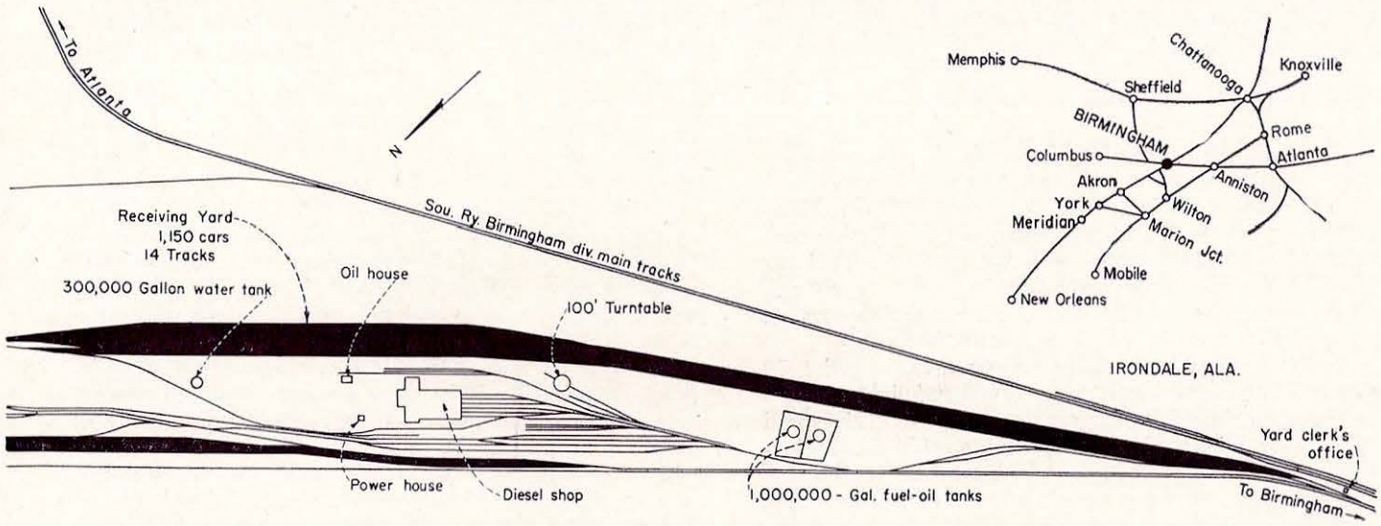
The East departure yard is situated along the easterly side of the classification yard and consists of six tracks in two groups of three each, giving the yard a total capacity of 512 cars. One group of three tracks turns easterly from the vicinity of the south end of the classification yard to a connection with the Birmingham division. Two of these tracks have a capacity of 150 cars each, while the third will hold 40 cars. The easterly end of this latter track serves as a pull-out for the 40-car trains dispatched to points east of Birmingham, as well as a thoroughfare and light-engine path between Birmingham division and Ernest Norris yard. In the other group of three tracks the capacities vary from 53 to 61 cars each, and are for trains dispatched to the south and the west. Two tracks from the departure (south) end of this yard run under the hump grade through an underpass, allowing trains or engines to pass from one side of the yard to the other without interrupting the flow of cars over the hump.

The Local yard is situated west of the north end of the classification yard. It contains 14 tracks varying from 14 to 33 cars each, with a capacity of 354 cars.

The throats of the classification yard and the three forwarding yards are closely adjacent. Between the two stub-ended switching leads extending northerly from the classification yard, as well as between these leads and the throat of the forwarding yards, are turnouts and crossovers to obtain short switching movements and to permit switchers to work simultaneously in making up the same train with minimum interference. Another switching track extends northerly from the Local yard to allow the blocking of cuts of cars previously switched to that yard from the classification yard.

A diesel locomotive terminal facility is located between the receiving yard and the West departure yard. It has service platforms for fueling, sanding and watering locomotives not requiring shop service, a separate platform with inspection pits, and a modern diesel shop for making light running repairs.

When an incoming train passes over a track circuit at the approach to the yard, a warning signal flashes in the telegrapher's office on the ground floor of the yard office. The telegraph operator then uses the intercommunication system to advise the person on duty in the control tower so that, after checking the indicator panel on his desk to see which of the receiving tracks



steadily increasing transportation requirements. The "hub" position of Birmingham is shown by inset map.

Car inspectors have use of ground-line speakers, set at tie level at 300-ft. intervals throughout the forwarding yards, enabling them to communicate with others.

are clear, he can direct the train into the selected track by means of signal indicators.

As the train passes the yard clerk's office at the yard entrance, the clerk calls off into a recording machine the numbers of the engine and of each car in the sequence they appear in the train. The conductor of the incoming train places the waybills in a wire basket which is hoisted up to the clerk's tower office. From the voice record, the clerk makes up a switching list and runs off enough copies on a duplicating machine to supply all concerned. These, together with the waybills, are distributed via pneumatic tube to the offices of the interested parties.

As the train pulls completely into the receiving yard, it is "stretched out" by braking against the pull of the locomotive. This takes the slack out of the train and makes it easier for a car inspector to examine couplers and draft gears. With the brakes set, he can also check the air-brake piston travel. He also opens the lids on the journal boxes to inspect the packing inside. A yardman follows the car inspector and releases the brakes on the cars by bleeding the air or releasing hand brakes, when they are set, to get the cut ready to be moved up to the hump. Meanwhile, the train's diesel locomotive is cut off and moved to the shop to be serviced and then added to the pool of diesel power for assignment to outgoing trains.

Engineer Acts on Radio Instructions

After getting word of which train in the receiving yard is slated to go up the hump next, the hump conductor notifies the engineer and crew of the hump switch engine on the yard's radio communication net. After the switcher couples onto the train, the engineer tells the hump conductor that he is "ready to shove." He is told to "go ahead," and a green light appears on a signal at the south face of the yard tower.

As the forward end of the train reaches a point 50 to 75 feet from the yard tower, the signal light changes to yellow, warning the engineer to bring his train speed to the 2 m.p.h. required at the hump. If the dragging-equipment detector is engaged by anything hanging too low from a car to clear a switch or retarder, the signal light changes to red until it is cleared by the hump conductor.

As the cars pass over the car inspector's pit the inspector examines their wheels and running gear. At night, lights at the sides and in the center of the track illuminate the wheels and underframes of the cars. If the inspector finds something wrong with a car, he uses the yard intercommunication system to tell the hump conductor to send the car into the "bad-order" track, and to tell the repair yard foreman the nature of the trouble.

Consulting his switch list, the hump conductor punches the buttons of the control panel at his desk to direct the cars through the several automatic switches to the desired classification tracks. As many as four consecutive switching routes may be set and stored by the machine until used. Over a loudspeaker, the hump conductor notifies a switchman, or "pinpuller," of the number of cars to be in each cut, and the pinpuller uncouples the cars accordingly.

Car Knuckles Are Kept Open

The Southern has taken a leaf from its book of experience with the John Sevier yard, which was rebuilt a few years ago at Knoxville, Tenn., and has applied a device that was developed there to its new Ernest Norris yard. It was found that difficulties were encountered in keeping coupler knuckles open during switching operations, with the result that some cars failed to couple properly in the classification yard. To overcome this, a compressed-air gun was devised for shooting a small peg to wedge the knuckle open (*Railway Age*, May 12, 1952, page 85). The air gun has a long handle to keep the user safely out of the path of the moving cars, and is provided with two trigger buttons on the handle—one to fire the piston and the other to recock the gun. After firing, the gun is reloaded with a Celotex triangular peg, ½ in. thick, which is firm enough to hold the coupler open and yet soft enough to crush easily when the couplers come together.

A building is located near the crest of the grade for use of the carmen who handle this operation and as a storage place for the supply of pegs. An overhead frame beside the track holds the compressed air tank and the movable slings that support the air hose. This gives the operator the mobility he needs to "peg" couplers and a convenient place to keep an extra gun in case of failure.

When a car or cut of cars breaks away from the train being switched it first encounters the track scale. The operating speed of humping is too high to permit sufficient weighing time on a track scale of the usual length, although it was placed only 33 ft. from the apex of the grade.

To secure continuous hump operation and, at the same time, do all required weighing, it became necessary to accelerate cars rapidly beyond the breakaway point on the hump for separating them for weighing and switching. The steep gradient required for that purpose quickly produces high car speeds (in excess of 10 m.p.h.) which makes the time required for the weighing cycle extremely critical. The scale, therefore, was made 90 ft. long and the weighing and recording is accomplished by electronic cells.

Through the use of the electronic equipment, a scale ticket is printed within three seconds after all wheels of a car to be weighed arrive on the weigh rails. The motion weighing is automatically controlled by a system of electric track circuits invented for this installation by Cox & Stevens Aircraft Corp., Mineola, N.Y. The weighing and recording cycle is commenced for a particular car the instant all the wheels are on the scale and those of the preceding car have left the scale. The

device times the cycle and records the weight after three seconds have elapsed but it is not printed if the car is not alone on the scale for this length of time.

In addition to the electronic cells, the scale has a conventional four-section lever scale which will be available for checking the results of weighing of the electronic system. The lever system will also be used for spot weighing should the electronic system become inoperative from any cause, such as power failure.

Radar Assists in Retarding

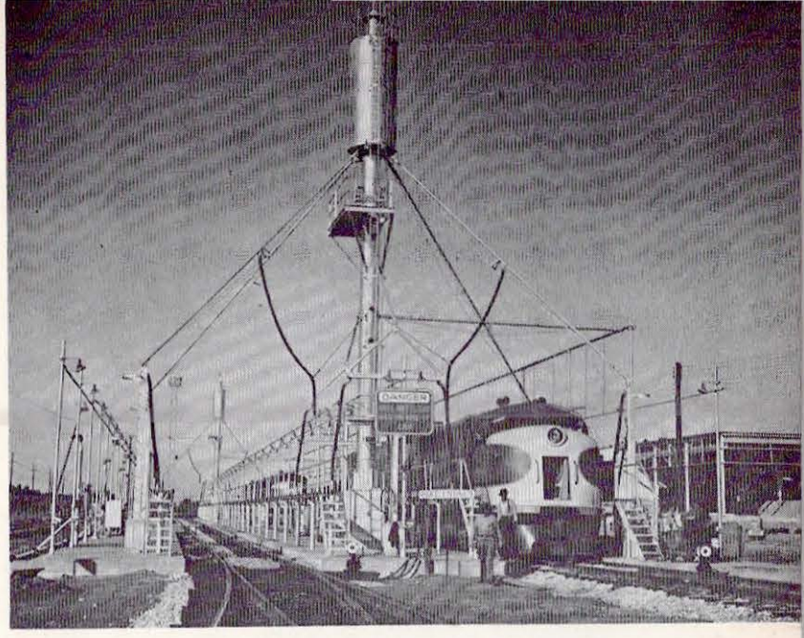
Gaining speed on the downhill side of the hump, the cars pass through the master retarder where loaded cars and cuts of cars are slowed down. Single empties are allowed to roll free through the master retarder as the retarder operator has another opportunity to regulate the speeds of these cars in one of the seven group retarders. From his tower, the operator can see the car from the time it leaves the hump, but he does not have to rely on his eye alone to judge its speed as it approaches the group retarder. Three speed meters on his desk, connected to radar measuring devices mounted between each pair of tracks just ahead of the retarders, show the speeds of the cars as they approach the group retarders so that he will know how much to slow them to produce a coupling speed that will not exceed 4 m.p.h.

A yardmaster in a tower at the north end of the forwarding and classification yards supervises the making up of trains. When he is ready to have his switch engines pull strings of cars from the classification yard, he lets his yard crews know the order in which to pull the various tracks to make up the train in proper order from caboose to engine. He calls a clerk in the yard office (by telephone or intercom) to have him pull the freight bills for those tracks from the circular file, set them up in train order and calculate the tonnage from the waybill weights. This tonnage figure, along with word concerning the diesel power available at the moment, determines whether a train can be made up containing all these cars.

While trains are being made up in the departure yards, the yard conductor keeps an eye on a panel of light indicators which show him when a track in a departure yard has filled up. As long as a green light is displayed on the indicator, the track is not fully occupied. When the light is extinguished, it warns that cars at the far end of the track have crossed a track circuit and there is just room enough left on the track for four more cars and a four-unit diesel. These indicators eliminate the need for a man to ride to the far end of the track to determine whether or not its capacity has been reached. Dwarf signals at the make-up end of the tracks are also installed to warn the switching crews.

Car inspectors then range the length of the train, checking the couplers, draft gears, running gears and journal boxes, and getting the train ready for the road. Compressed-air outlets are conveniently placed throughout the departure yards but, because air brakes must be tested for operation from front to rear over the entire train, car inspectors must be stationed at each end of the train. It is also necessary for them to check the brakes along the train. These duties require them to communicate with each other to determine whether or not the air is coming through, so a communications system was installed employing "ground line" loudspeakers at tie level at 300-ft. intervals.

The diesel repair shop is approximately 241 ft. long by 159 ft. wide and covers six tracks. Three tracks, for progressive maintenance, are provided with inspection pits, with adjacent depressed floors and elevated platforms. The other three tracks are located in a high bay for heavy repairs, with its floor at rail level. Locomotives will be placed on two outside tracks for repair work, both of which are equipped with continuous jacking pads, while another track normally will be used for wheel and truck work.



By means of this oil separator, waste oils are removed from the water draining from the diesel shop and servicing platforms before getting into the sewer system.

Another section of the shop building houses a parts-reconditioning room, injector room, filter cleaning room and storehouse at platform level, and a storage and a machine room and storehouse on the basement level. An office portion of the building, consisting of two floors, houses the master mechanic, storekeeper, clerks and supervisors, and contains wash- and locker-room space for all employees.

A turn-around inspection platform is provided outside the building along with sanding and fueling facilities. Nearby is a washing platform, capable of servicing a four-unit freight diesel, and a building housing the boiler facilities. Steam for the diesel repair shop and other facilities is furnished by three 500-hp. and two 150-hp. Amesteam generators furnished by Railroad Supply & Equipment, Inc.

Extensive Car-Repair Yard

Light car repairs are handled in a repair yard between the hump track and the West departure yard. The working area provides six parallel tracks, with concrete working platforms on each side, 650 ft. long. An area 200 ft. long at one end is covered by a steel shed spanning all six tracks for protection during inclement weather. This yard is also provided with a fabricating shop, as well as service buildings and wheel storage tracks which are grouped along one side of the repair track.

Other yard facilities include numerous thoroughfare tracks, floodlight towers, storehouses, locker buildings, clerk's offices, icing facilities, livestock pens, two water wells, a 300,000-gal. water tank, two one-million-gallon fuel-oil tanks, a large oil separator, and a sewage disposal system.

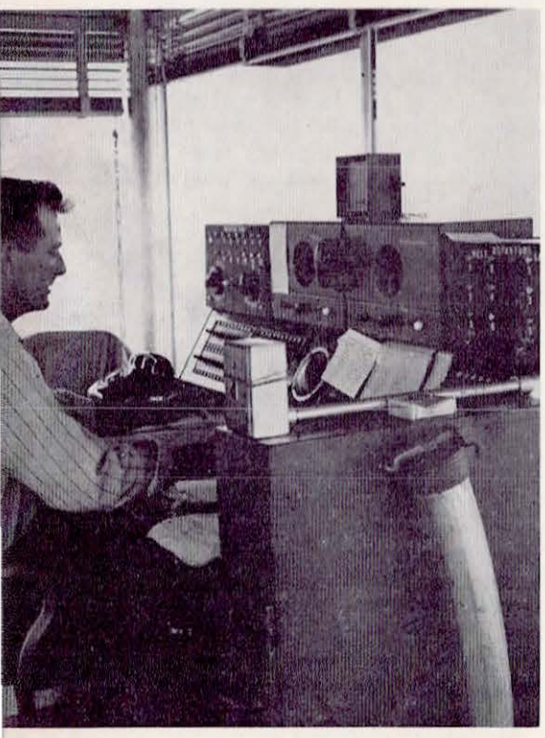
When entirely complete, Ernest Norris yard will contain 92 miles of tracks, 338 turnouts, about 232,000 crossties, 1.3 million board-feet of switch ties, and about 175,000 cu. yd. of slag ballast. Much of the work was done under contract.

Modern Retarders And Communications

In Ernest Norris Yard . . .

Car routes set up by automatic switching system; radar devices measure car speeds; retarders controlled by one machine—Radio, talk-back speaker system, and "intercoms" provide complete communications

This one machine controls all the retarders in the classification yard. The meters at the top of the panel indicate speed of cars as measured by radar.



Communications control center includes console for control of talk-back speakers; radio communication with switch engines; and indicators of occupancy of yard tracks.

Switch engines are equipped with radio which operates on any one of four channels for use in different types of yard service.

Operations throughout the Ernest Norris yard are expedited by modern signaling and communication systems. The 56-track classification yard itself is equipped with power switches, car retarders and radar devices for measuring and indicating the speed of cars.

The switches down the hump and leading to the 56 classification tracks are operated by special high-speed 110-volt d.c. electric switch machines, designed especially to operate a switch in approximately 0.6 second from the time of initiating control. The machine is so constructed that it can be trailed through without damage to the machine, the switch points or fittings.

Automatic switching is effected by a control system by which each switch in a route lines up automatically ahead of a car (or cut of cars) as it passes down the hump and to its designated classification track. For each classification track there is a corresponding numbered button on an office panel at the crest of the hump. For a car or cut to be routed to Track 10, for example, the hump conductor pushes No. 10 button. This initiates a route description, in the form of a series of codes, which automatically controls the operation of the switches ahead of the car or cut.

In the plan, the single track lead down the hump is connected through switches to seven secondary leads, each of which leads to a group of eight classification tracks. On the main lead down the hump a retarder 148 ft. long is used to control car speeds, especially of heavily loaded cars, and to adjust spacing between cuts of cars. On each of the leads to respective groups of eight tracks each, a retarder 99 ft. long gives the final adjustment of speed to each car or cut, so that it will travel through the switches and turnouts and enter its respective yard track at a non-accelerating speed. Thus only nine retarders serve this entire yard with a total of 56 tracks.

All these retarders are controlled by one man at a control machine in a centrally located tower 40 ft. high. This control machine consists of two panels mounted horizontally in the form of a large letter T, the cross panel being 24 in. by 54 in. and the stem panel 20 in. by 42 in. About 28 in. of this stem panel is etched to show the track layout from the hump down through the four junction switches and the eight retarders. Small levers for controlling the retarders are placed at the

symbols representing the respective retarders. The 148-ft. retarder is in three sections each controlled by a lever, and the 99-ft. retarders are in two sections, each also controlled by a lever. Each lever operates to three positions; one for heavily loaded cars, one for lightly loaded or empty cars, and one for releasing the retarders. Small lamps repeat the occupancy of sections of track to indicate positions of cars or cuts of cars.

The speed of cars in this area of the yard is measured accurately by specially designed radar devices, developed first by the Southern for the John Sevier yard at Knoxville, Tenn. These speeds are shown on indicators mounted in a row just above the control panel. These radar devices were furnished by the Automatic Signal Division of Eastern Industries, Inc., East Norwalk, Conn.

Ordinarily the switches are controlled by the automatic system, as just explained. However, controls are provided on the retarder operator's machine so switches can be controlled manually to make trimmer moves or in testing the operation of switches. Color-light hump signals, controlled by the hump conductor, display red for stop; green for proceed at normal hump speed; yellow-over-yellow for proceed at medium hump speed; yellow for proceed at slow hump speed; and flashing-red for back-up.

A self-restoring dragging-equipment detector is located on the lead to the hump. Open hopper-bottom car doors or dragging equipment will operate the detector and set the signals at stop, as well as sound alarms in the inspection pits.

These "dwarf"-type talk-back loudspeakers are adjacent to switch stands. They are used in locations where clearances will not permit use of poles.

"Stop-Shoving" Signal

At the two forwarding yards, track circuits are installed from the clearance point of each of the tracks for 400 ft. The relay of each of these circuits controls a one-unit dwarf signal at the entering switch at the other end of the tracks. The signal displays a yellow light when the track or "shove" circuit is unoccupied, but when it is occupied by a car the dwarf signal light is extinguished. Consequently, as cars are shoved into each track to make up trains, they are shoved until the dwarf signal light is extinguished. The crew knows then that the cut has reached the end of the track, and any further movement would foul other tracks.

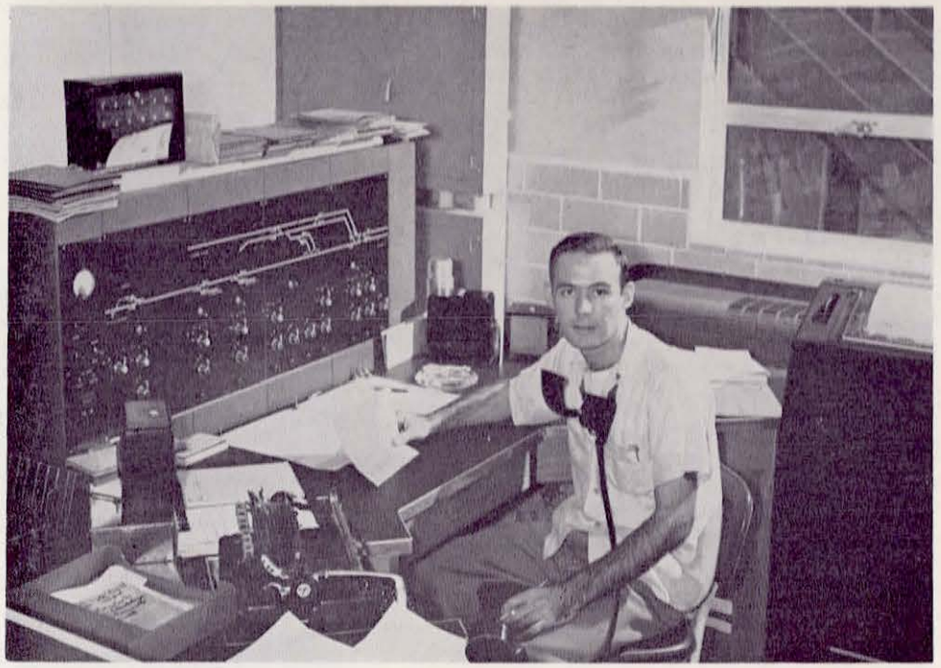
In addition to the "shove" circuit, forwarding and receiving yards are equipped with occupancy track circuits from the end of the "shove" circuits for the full length of the tracks to the clearance points. Repeater light indicators are installed in the north yardmaster's office. When the tracks are clear, the indicators are illuminated, and when occupied they are dark. An interlocking control panel, in the telegraph office on the first floor of the yard office, remotely controls interlockings at four junctions within the yard area and for the approach to the yard on the Alabama Great Southern. The power switch machines, automatic switching system, car retarders, signals, dragging-equipment detectors and control machines, for the entire project, were furnished by the General Railway Signal Company.

Power for operating the retarders is supplied from a 10-kw. 265-volt d.c. generator, which is connected across a set of 120 cells of 240-a.h. Exide lead batteries. The generator, which is of the diverted-pole type, has overload capacity for short periods, and, in combination with the storage battery, can meet peak requirements of closing retarders against moving car wheels.

The communications systems, including intercommunications, talk-back speakers and radio, that have to do with the general operations of the yard, are all centered

This clerk uses a Dictaphone to record a brief description (owner, number, type, load, empty, etc.) of each car in the order in which it passes in a train entering the yard.

Teletype equipment is used to transmit waybills from the freight agency in downtown Birmingham to Ernest Norris yard.



This machine in the operator's office in the yard building controls interlockings at four junctions where trains enter and depart from the yard.

in an office on the top floor of a 50-ft. tower at the crest of the hump. The panel of the communications console in this office has indication lamps and 160 keys to connect to paging speakers and talk-back speakers throughout the entire yard area. This console and the relays were furnished by the North Electric Manufacturing Company, Galion, Ohio, and the amplifiers by the Electronic Communications Equipment Company, Chicago.

A second communications center is in a 30-ft. tower at the north end of the yard. Its control panel was made by Southern forces, using Clare relays and Stromberg-Carlson amplifiers. The paging loudspeakers, at 1,600-ft. intervals throughout the yard, are Racon 30-in. reflex trumpets having 5-ft. air column with 2-ft. bell opening, and powered by 25-watt drivers. Several kinds of talk-back speakers are used. One consists of two Racon 9-in. midget marine speakers, equipped with 25-watt driver units, mounted on poles about 8 ft. high. A second type of talk-backs are the dwarfs, each consisting of two University submersion-proof speakers mounted back-to-back in a special cast-iron housing 13 in. high. These dwarfs are mounted adjacent to and in line with switch stands, along leads where clearance will not permit the use of poles. A third type of speaker known as the "ground-line" assembly consists of one University speaker mounted on an assembly installed between crossties on the outside of the track. The top of the box is about ½-in. below the top of the rail. About 5½ mi. of new types of plastic insulated cables made by the Ansonia Electric Company were installed for the communications circuits. Messenger wires are stainless steel.

Two-way radio communication is provided between nine diesel switch engines and a land station. This radio equipment is the Westinghouse Type FE. Because the engines are used interchangeably in four different services in the yard area, all locomotive radios are arranged for operation on four frequencies. In the land station, an electronic device causes the transmitter to send a 1,200-cycle tone for ½ sec. at 10-sec. intervals. These tones or "beeps" are heard in the locomotive loudspeakers, and are thus an indication to enginemen that the radio is in operating condition.

Special car-checker towers with floodlights have been erected at each end of the receiving yard. As incoming trains pass these points, the clerk calls the car initials and numbers into a Dictaphone microphone. The recordings are used in the preparation of switch lists.

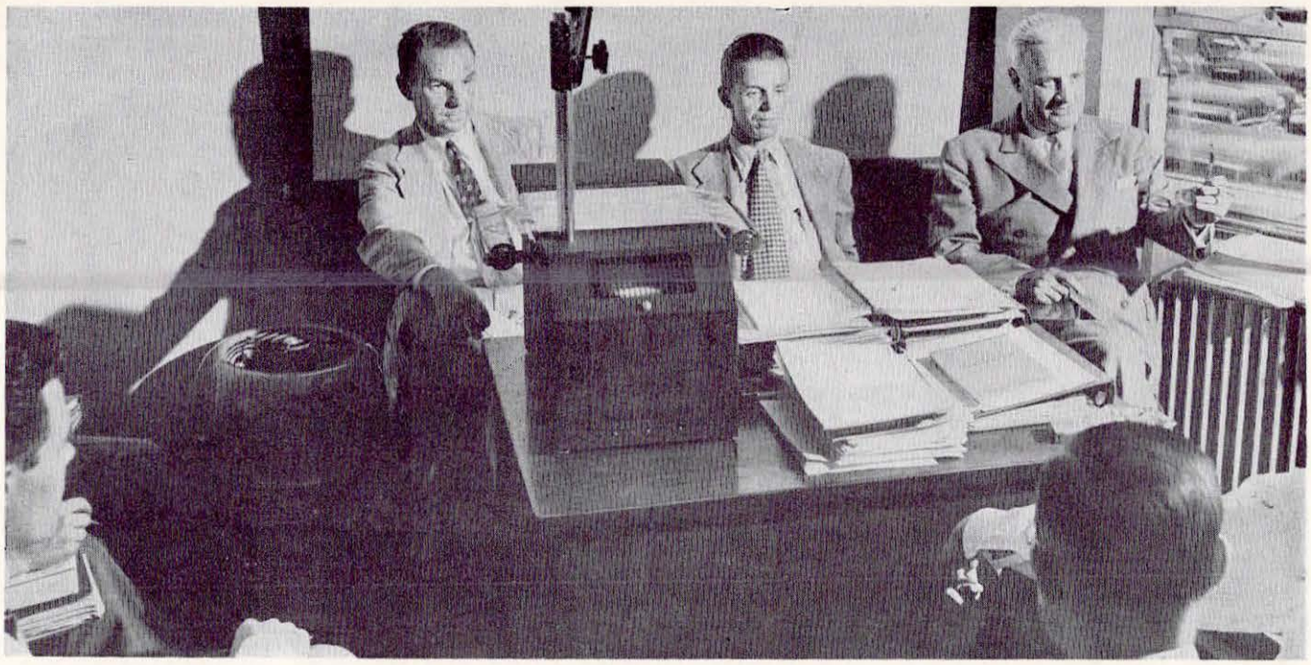
For general illumination of the yard, three 90-ft. towers and ten 100-ft. towers are located to provide uniform lighting at all points. The illumination is more concentrated and at a higher foot-candle value for the area from the hump to the west end of the classification yard. The floodlight projectors are rated at 1,500 watts, with different types of lenses to give long-range, spread and diffusing beams as required. Each tower is equipped with an electric eye and magnetic switch for automatic control of the lights.

To provide a higher intensity of short-range light for special uses, 150- and 300-watt sealed-beam floodlights are used. These are placed in varying heights up to 15 ft. and mounted on pipe posts, which also serve as conduit for the cables or wires. Such lights at 10-ft. mounting are strung along the hump track from the south end of the inspection pit up to and through the long retarder.

Also located in this area, are three 500-watt sealed-beam floodlights mounted on the roof of the first floor of the yard office building. Similar lights are installed at each end of the receiving yard for use of checkers in recording numbers and initials of cars in incoming trains.

Eight sodium vapor lights mounted in pairs are installed on the east side of the master retarder on the hump for use during fog. These lamps do not light the retarder, but a car between the light and the tower causes a silhouette effect which indicates the presence of a car to the operator. These lights are controlled by the car retarder operator.

Electrical energy for power and lighting, except d.c. for retarders and power switches, comes from a General Electric Company rural package substation rated at 2,000 k.v.a.



Emery's sales representatives take part in a sales training course.

PREDICTABILITY— That's What the Shipper Wants

(This article is a digest of an interview of John C. Emery, president of Emery Air Freight Corporation, by a Railway Age editor. Mr. Emery, a third generation railroad man, for a number of years was a member of the editorial staff of this paper. — Editor)

Reporter—Mr. Emery, you've built up quite a successful air freight forwarder business in the last five years, and apparently it's still growing. What do you think are the main reasons for your company's success?

Mr. Emery—There's nothing strange about it. We've merely *applied* the fundamental principles which I learned in my days on the railroad, and with Railway Express Agency. They are also the principles which *Railway Age* has been preaching for many years, and which I used to preach myself when I was writing editorials for your magazine. The point is that principles don't change. Only practices change. Railroads are concerned with tons and miles per hour while my company, as an air freight forwarder, is concerned with pounds and miles per minute, but otherwise we are not different.

Reporter—Can you be a little more specific, especially as your point applies to the transportation service that shippers buy?

Mr. Emery—Certainly. Take the word "dependable" which is sure to crop up in any talk about transportation service. You've heard many railroaders say that what the shipper wants is dependable service. They've said it for over a hundred years, and it's perfectly true. We know that's a sound principle, and we apply it. Everything we do as a carrier, and everything we use—our system of individual control for every shipment, our extreme flexibility in the use of every kind of transportation available, our Teletype network, our round-the-clock coverage—all are designed to produce dependable service for our customers. Of course, sometimes we slip and are anything but dependable, but those occasions are infrequent and our average in respect to service predictability is very high.

Reporter—What exactly do you mean when you say "service predictability"? Does that mean delivery tomorrow . . .

Mr. Emery—No, it is a lot tighter than that. It is predictability in terms of the hour rather than the day of delivery. This is one difference beween railroad transportation and air transportation as we conduct it. In railroad terms, the distance from coast to coast is eight or nine or ten days, depending on whose freight solicitor you are talking to. In air line terms, it is about twelve hours. It is all right for a railroad to define dependability as one, two or eight days transit time. To us, dependability and predictability mean, day after day, to pick up a shipment at 7 or 8 p.m. and to deliver it across the country at 8:30 a.m. Not 9:30 or 10, but 8:30. Or we may make a pickup in Chicago at 11 a.m.

Communications and operations office of Emery at Chicago.

and deliver it in Philadelphia before 6 p.m. the same evening. We go all out to hit such delivery deadlines right on the nose. That is what our customers buy and pay well for.

Reporter—I shouldn't think it would be possible to pin point the deliveries of all your shipments.

Mr. Emery—You are right, of course. We work with a close eye on the delivery deadlines given us by customers, but only a few of them are extremely tight—perhaps allowing an overall transit time from door to door of actual flying time plus two or three hours. We are prepared to give "fire engine" service of that sort when it is needed, but the occasions are relatively few. Most of the time a comfortable degree of coordination between air schedules and our truck operations will do the job. You know, like railroad freight, air traffic ordinarily spends more time sitting in terminals than it does traveling from place to place. Our objective is "speed on the ground to match speed in the air," to overcome that common tendency. By scheduling our pick-up and delivery service around the clock, we can meet our delivery deadlines on time or ahead of time.

Reporter—How do you make such a good record for on-time delivery when air line schedules frequently are interrupted by bad weather?

Mr. Emery—Actually, we are hampered very little by bad weather. Usually we find that we can wait out the weather, rarely more than two or three hours, and still make the best time by air. Otherwise we do just as a railroad does if its line is broken by a wreck or washout. We divert to an open channel. Our operating principle is exactly the same. In practice, though, I think we do it much faster. With us these diversions are accomplished in a matter of minutes—to another air route or to any kind of surface transportation. We may send a shipment from New York to Cincinnati by way of Chicago and still meet an 8 a.m. deadline. The main thing is the deadline, the dependability in any circumstance for which our customers look to us.

Reporter—You mentioned that you pick up and deliver at all hours of the night or day. Recently I've heard railroad freight agents say that more and more firms are restricting delivery hours. For example, some companies will not accept deliveries on certain days or during certain hours of the day. If your customers will accept at all hours there must be a large percentage of the shipments you handle which are emergency in nature.

Mr. Emery—No, you're wrong there. Only about 10 per cent of the shipments we handle represent real emergencies—one-time affairs. The bulk of our traffic moves day after day from the same shippers to the same consignees. And you may be surprised at this, as I have been: We have two classes of service at two different rate levels. The higher priced service is really expensive—for example, $21.38 for a hundred pound shipment, New York to Chicago—but it is the one which offers maximum flexibility and dependability. I always expected that relatively little of our business would stand such prices. Instead, nearly 65 per cent of our shipments move in the premium service, and this percentage has been increasing each year. It seems to me that this proves the value to shippers of absolute dependability.

Reporter—I suppose the value is there because your premium service, at high cost, permits your customers to make savings in other directions which are even larger than the premium in your rates.

Mr. Emery—Precisely. There is a well-defined and now far advanced trend in production and distribution toward the principle of continuous flow, from raw material through production, and from production to the consumer. The purpose is to reduce or eliminate stockpiling, warehousing, rehandling, etc. The inescapable requirement in making this "flow" plan work is predictable transportation, and any carrier prepared to offer that kind of service can get business, even at high rates. There is nothing so costly as a production line standing idle for lack of material to work on.

Reporter—Your service is fast. I presume you don't mean to imply that speed is not a factor in bringing you these non-emergency, day to day shipments.

Mr. Emery—No, speed is a factor, and a big one. Many—if not most—shippers will take all the speed they can get, but I am quite sure that on our traffic today, dependability is more important. Where the speed

Emery delivery truck receives freight from United Air Lines plane.

of air transportation will make itself felt will be in another direction. The speed of the airplane, in the final analysis, has simply reduced the size of the map of the United States. In transit time, air transport compared to rail, coast to coast, is about the distance from New York to Buffalo. In time, procurement, production and distribution patterns in industry will be adjusted to this new, smaller map, just as industry adjusted itself to the new railroad map over a hundred years ago. When that time comes, speed will fully equal dependability in importance to shippers.

Reporter—Do you think that most of the l.c.l. and l.t.l. freight being carried today is susceptible to movement via your type of service?

Mr. Emery—At the risk of appearing out of my mind, I will say yes. It will take a long time. Relative rates are now much too far apart. But air freight rates will come down and the value of speed will increase, and so I believe that in principle a great deal of today's l.c.l. and l.t.l. freight is susceptible in the long run to air service. Not that we want it today. We couldn't lift it.

Reporter—What is the weight of your average shipment? Is it mostly package traffic?

Mr. Emery—Yes and no. We handle many one-pound shipments, and about 80 per cent weigh 100 lb. or less. But the average is over a hundred pounds, and increasing. No, we are not wholly a package carrier. We frequently carry shipments weighing 6 or 8 tons, and one time we flew a 12,000 lb. piece.

Reporter—Is there anything other than dependable service which you think has contributed to your company's success?

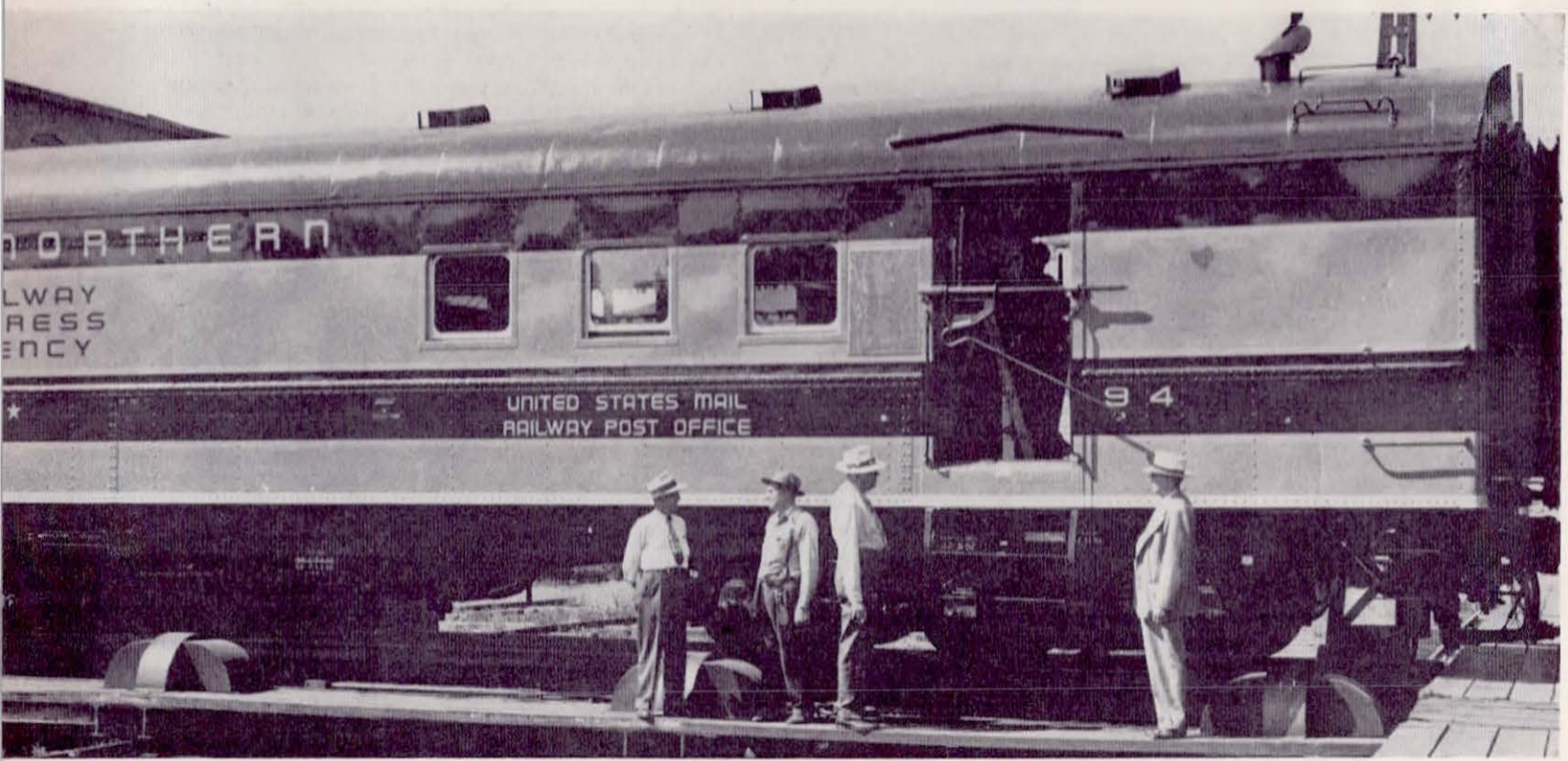
Mr. Emery—Yes, information. We can tell a customer anything about his shipment at a moment's notice. It goes beyond a good tracing service, and it must, because we are dealing with times in transit measured in terms of hours rather than days. From the start, we have made it a practice to give shippers a report by wire confirming the delivery of his freight—the minute it got there and who signed for it. A detail, sure, but one that shippers have begged for for years and without which they have to waste money on long-distance phone calls. We can tell a shipper or consignee exactly where his freight is at any given moment, and when it will be delivered. If we know that a production line or a special showing or a sale is depending on a shipment's arrival by a certain hour, and the deadline for any reason is going to be missed, we call the consignee and tell him. No shipper likes to drop his freight into a carrier's hopper and then sit around, chewing his fingernails, waiting for it to appear at the other end of the line. Shippers need information, and in giving it to them—as they want it, not as it is convenient to us to give it—we gave our service a highly salable characteristic.

Reporter—Anything else you have done which has helped you especially?

Mr. Emery—One other thing I might mention, although it is certainly not novel. We really work at soliciting traffic. From the start, we have dug deep into the ways that businesses operate and why they do so. We have deliberately looked for problems and then tried to work out their solution.

Reporter—One final question. From your railroad background, and your experience with your company, is there anything which you have observed about the railroads today which you think is either especially good or especially bad from the standpoint of shippers who are your customers and theirs?

Mr. Emery—I am certainly not going to be critical because I have been too long out of direct touch with railroading. There are very positive indications that the railroads recognize the fundamental importance of scheduling freight operations and keeping on schedule. The need for prompt, accurate passing reports is also being recognized more clearly. And freight advertising seems to be on the rise in quantity and quality. For instance—and there are others, of course—I take my hat off to the Chesapeake & Ohio campaign which is building up to industry managements the importance and dollar-value of their traffic departments. What those ads say about the contribution that the traffic manager can make to smooth, economical production and distribution is true—more true today than ever. I wish we had thought of the idea first.



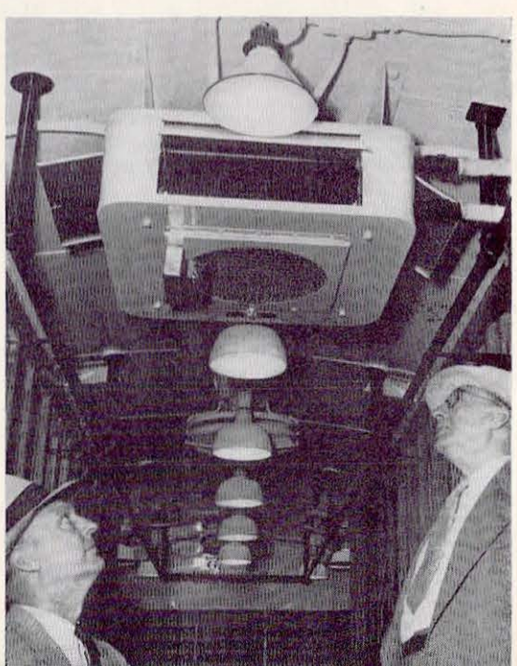
Mail-room end of a new Great Northern baggage-mail car converted from an old diner at St. Paul shops.

On the Great Northern . . .

Head-End Units from Old Passenger Cars

Thirty-four cars rebuilt in the past three years—
Special attention paid to modern equipment and heating

(Left) Inside of the old dining car stripped down and equipped with a new turtle-back roof. (Center) Interior of the mail room showing Vapor unit-fin floor heat and controls. (Right) The overhead unit heater and lighting fixtures in mail room.



The Great Northern has just completed an extensive rebuilding of old passenger equipment into modern cars primarily for handling baggage and mail. The program, initiated in 1949, involved conversion of 34 cars into 29 baggage, 4 baggage-mail and 1 air-brake instruction car.

A modern baggage-mail car, No. 97, symbolizes what has been accomplished by conversion of an obsolete diner. This car is about 83 ft. in length; weighs 150,000 lb.; has a 30-ft. mail room to current Railway Post Office specifications and a 50-ft. baggage room also meeting all the latest standards. The principal weight saving of about 50,000 lb. was effected by eliminating large water tanks and heavy kitchen equipment.

The car or diner in question was of 1926-29 vintage, all steel and of fishbelly underframe construction. At the Great Northern shops at St. Cloud, Minn., this car was stripped of piping, interior finish, flooring and the old clerestory roof. The framework and shell were sand-blasted and repaired in kind where necessary. New sheathing was applied above the belt rail and windows and doors were installed as planned.

The roof consists of 28 built-up I-sections of Corten steel which form carlines and support an all-welded open-hearth 16-gage steel turtleback roof. The roof unit was jig welded at bench height and applied to the car complete with carlines and purlins as a unit.

Side and roof insulation is Fiberglas, 3 in. thick. Horizontally crimped sheets for stiffness and rigidity are held in place with Parker Kalon self-tapping screws and form a suitable interior finish.

The floor is insulated with a 2-in. blanket of Fiberglas and finished with double planking of 13/16-in. boards laid crossways. A 3½-ft. by 10-ft. wood fish-rack floor section is built into each corner of the baggage end and suitably drained.

An important factor in satisfactory train heating is the 2½-in. trainline with which this car is equipped. Pipes are insulated with Union Asbestos Wovenstone pipe covering. End valves and metallic conduits are of Vapor manufacture. A Vapor No. 968 regulator reduces trainline pressure, disposes of condensate and supplies steam to the heat exchanger for the car's hot-water system. Fin radiation supplies floor heat around the sides of the mailroom and washroom; a 10-ft. fin radiator on one of the side walls supplies floor heat to the baggage room. In winter baggage room doors are prevented from freezing by heat from a 1-in. copper pipe trenched just inside each door track.

Both the mail and baggage rooms are equipped with the new Vapor overhead heater No. 935 which receives, under thermostat control, the right amount of steam from solenoid steam admission valves to keep each part of the car at preselected temperature. The overhead heater fan draws air past thermostats into the bottom of the heater, and forces it through a section of steam-heated fins on each of four sides where hinged covers may be set to direct the warm air crosswise of the car, longitudinally, or in all four directions at once, as most needed. The heater fan is driven by a two-speed ⅛-hp. 32-volt motor.

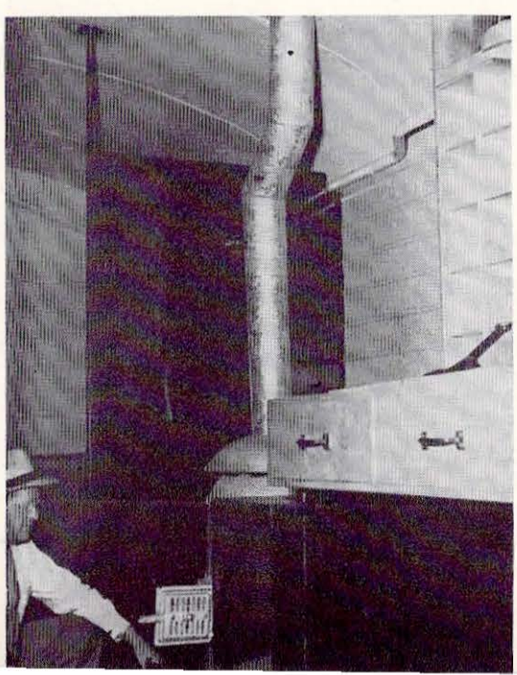
Each overhead heater is located near the side doors so as to offset cold air coming in the doors at station stops. The heater has a capacity to distribute 50,000 B.t.u. per hour when circulating air at the rate of 1,000 cu. ft. per min.

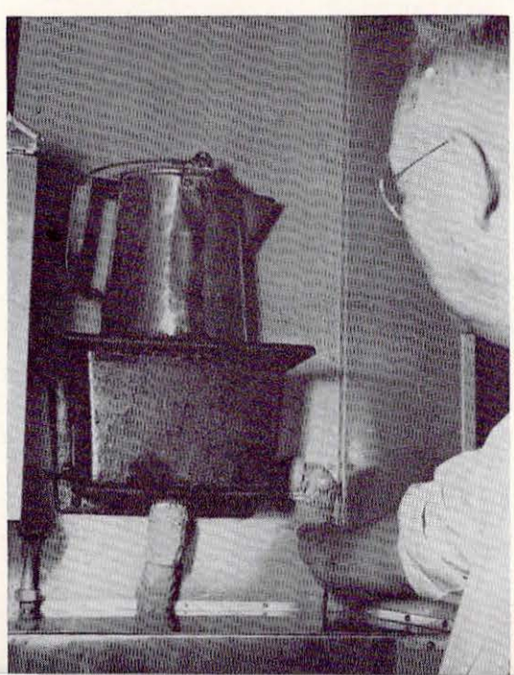
Lighting in the mail room conforms to R.P.O. specifications and includes sixteen 50-watt lamps and one 25-watt lamp with Safety fixtures of the drop-reflector type. Recessed ceiling fixtures are used in the baggage room which has six 50-watt, four 25-watt and three 15-watt lamps. Electric power is supplied by a Safety 5-kw. 32-volt, belt-driven generator, operated in connection with an Exide 600-amp.-hr. electric storage battery. The total electrical load is 56 amperes.

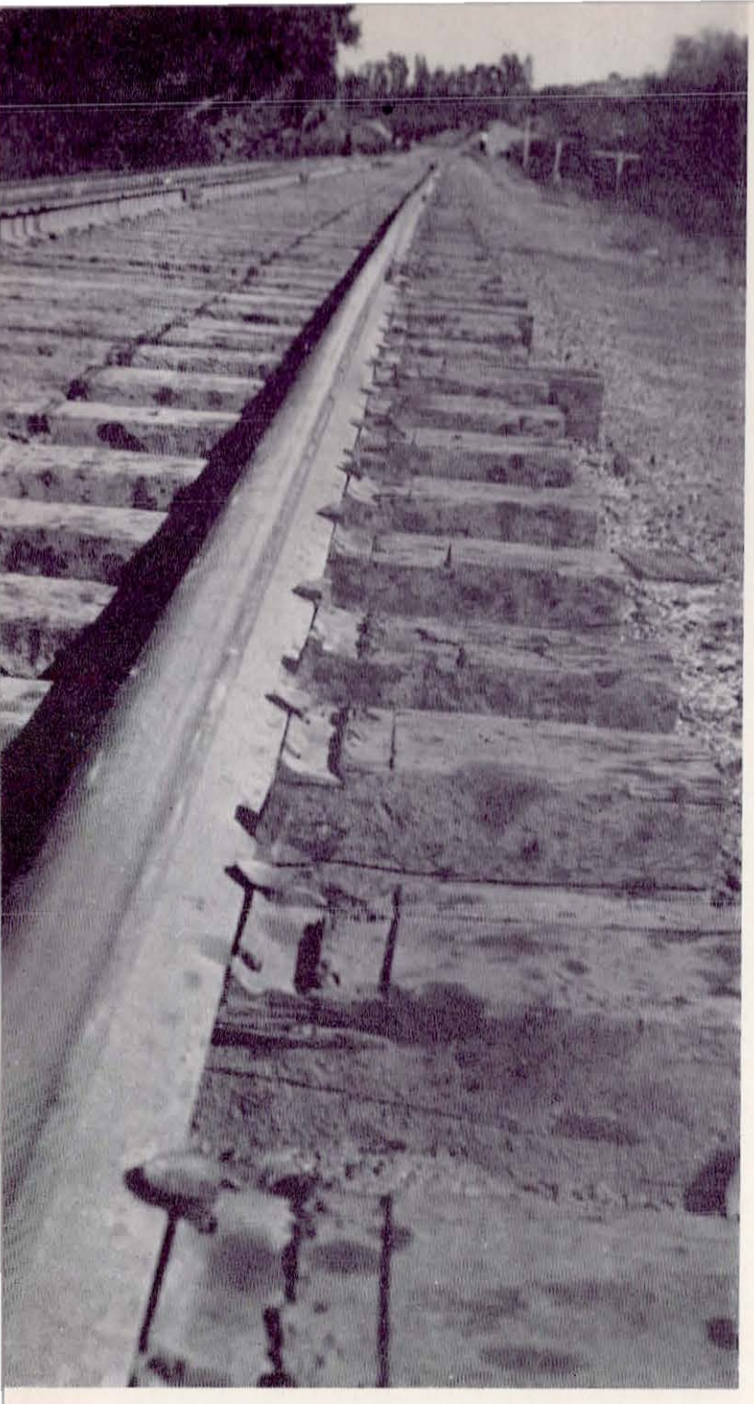
The car with steel work complete was moved to the Jackson Street (St. Paul) shops of the Great Northern for application of interior finish and equipment. Shop-made postal racks and mail-handling facilities of the latest type were installed. Wardrobe and washroom were completed, water cooler and steam-heated coffee cooker and desk were installed.

The trucks were thoroughly overhauled after having been stripped and put through a special washing machine for the complete removal of dirt and grease with C. & H. cleaner. Truck frames were trammed and straightened as necessary. Pedestal wear plates, bolster wear plates, chafing plates, center plates and Drews side bearings were renewed. New and lighter springs of both the coil and elliptic types were applied. Ex-Cell-O brake pins and bushings were renewed.

(Left) Emergency stove, coal box and desk in the baggage room. (Center) Steam-heated coffee cooker in the mail room. (Right) The rubberized protection plate prevents marring exterior finish in catching mail pouches.







The most important cause of tie failure today is mechanical damage, such as tie plate wear (shown here), splitting, shattering, ring separation and spike killing.

Higher Tie Renewals Foreseen for 1953

With many railroad men present and participating, the annual meeting of Tie Association brings out much information of interest and value to consumers as well as producers of ties

Predictions that crosstie renewals next year will show a moderate to substantial upturn as compared with 1952 were made by speakers at the thirty-fourth annual convention of the Railway Tie Association, which was held on October 22-24 at the Jung Hotel in New Orleans. It was also brought out that there is no serious competitor in sight for wood as the most suitable and economical material for crossties, and that the great majority of ties removed from track today are taken out of service because of mechanical wear rather than decay.

Attendance at the meeting totaled 510 members and guests, including 131 railroad men. This was the largest attendance in the history of the association. The meeting was directed by the president of the association, W. J. Chambliss, Jr., vice-president, Bond Brothers, Louisville, Ky., assisted by Harry Dunstan, vice-president, Southern Wood Preserving Company, Atlanta, Ga., and first vice-president of the association.

During the three-day program of addresses and reports much information of direct interest to railway men was presented. Among the features in this category were two addresses on "What's the Outlook for '53?" This question was answered from the standpoint of the railroads by J. H. Aydelott, vice-president, Operations and Maintenance Department, Association of American Railroads, and from the standpoint of the tie producers by D. B. Frampton, president, D. B. Frampton & Co.

Other features of direct interest to railroad men were addresses by T. A. Blair, chief engineer system, Atchison, Topeka & Santa Fe, on "Two Years Experience on the Santa Fe in Using Tie Inspectors to Determine the Cause of Failure of Ties at the Time They are Removed"; by C. B. Harveson, chief engineer maintenance, Baltimore & Ohio, on "History of Crossties on the B&O"; by Merwin H. Dick, engineering editor, *Railway Age*, on "Class I Tie Requirements in '53"; by A. L. Kuehn, president, American Creosoting Company, on "What Is the Most Economic Length of Life for Crossties?"; and by J. M. Hood, president, American Short Line Railroad Association, on "Short Lines Also Use Ties."

Committee reports of particular interest to users of ties were those of the Committee for the Better Understanding of Problems Between Tie Producers and Users, of which Paul D. Brentlinger, forester, Pennsylvania, was chairman; on Timber Conservation, of which D. B. Mabry of the T. J. Moss Tie Company was chairman; and on Checking and Splitting of Crossties, of which J. A. Vaughn of the Southern Wood Preserving Company was chairman.

Election of Officers

In the election of officers Mr. Dunstan was advanced to president; J. E. Peterson, vice-president, Gross & Janes Co., St. Louis, Mo., was advanced from second vice-president to first vice-president; and J. H. Tabb, J. H. Tabb & Co., Houston, Miss., was elected second vice-president. Elected to the Executive Committee were Edward F. Schlafly, Potosi Tie & Lumber Co., St. Louis; Meyer Levy, T. J. Moss Tie Company, St. Louis; Frank W. Campbell, Jr., W. B. Crane Company, Chicago; and Douglas Grymes, Jr., Koppers Company, Pittsburgh. In addition, Mr. Chambliss, as retiring president, automatically becomes a member of the Executive Committee. Roy M. Edmonds was re-elected secretary-treasurer by the Executive Committee.

Mr. Aydelott showed how the shortage of new rail in 1952, resulting from the prolonged strike of steel workers, had an important retarding effect on tie re-

Harry Dunstan, president-elect of the association.

newals. He expressed the hope that future events would permit the rail mills to produce a minimum of 1,600,000 tons of new rail for the Class I railroads, which tonnage is "considered by them to be a normal yearly requirement." The railroads will be very fortunate if they receive 1,200,000 tons of rail in 1952, he declared.

Mr. Aydelott then went into a discussion of "other factors which will indicate the level of purchases and use of crossties, not only in 1953, but in succeeding years." He noted that virtually all ties used by the railroads today are treated, that they are protected against mechanical wear with superior tie plates; that good drainage of the roadbed, essential to tie life, has received particular attention in recent years; that unstable roadbed, also a factor in shortening tie life, is being stabilized by grouting; and that the use of higher grades of ballast is resulting in increased service life for all components of the track structure, including crossties.

Other factors having a bearing on the requirement for crossties, as brought out by Mr. Aydelott, include operating trends resulting in increased spacing between sidings and permitting the reclamation for reuse of much material, including crossties, from the abandoned sidings, and the abandonment of a considerable mileage of branch lines each year.

The rate of crosstie insertions during recent years indicates a projected life span for ties of about 33 years, according to Mr. Aydelott. His opinion is that, in view of the various measures being taken to increase tie life, the railroads should, in due time, secure an average life from their crossties of from 35 to 40 years.

Turning to a consideration of prospects for tie renewals next year, Mr. Aydelott said that the railroads will need perhaps as many as 2½ million ties in 1953 for construction purposes and changes in alinement. Together with maintenance ties, he expects that the total requirements will be "something like 32,500,000 ties." "You will appreciate," he said, "this is not a firm figure for reasons which I have stated and does not take into consideration an adverse change of economic additions which many are predicting for the second half of 1952."

Predicts Higher Renewals in 1953

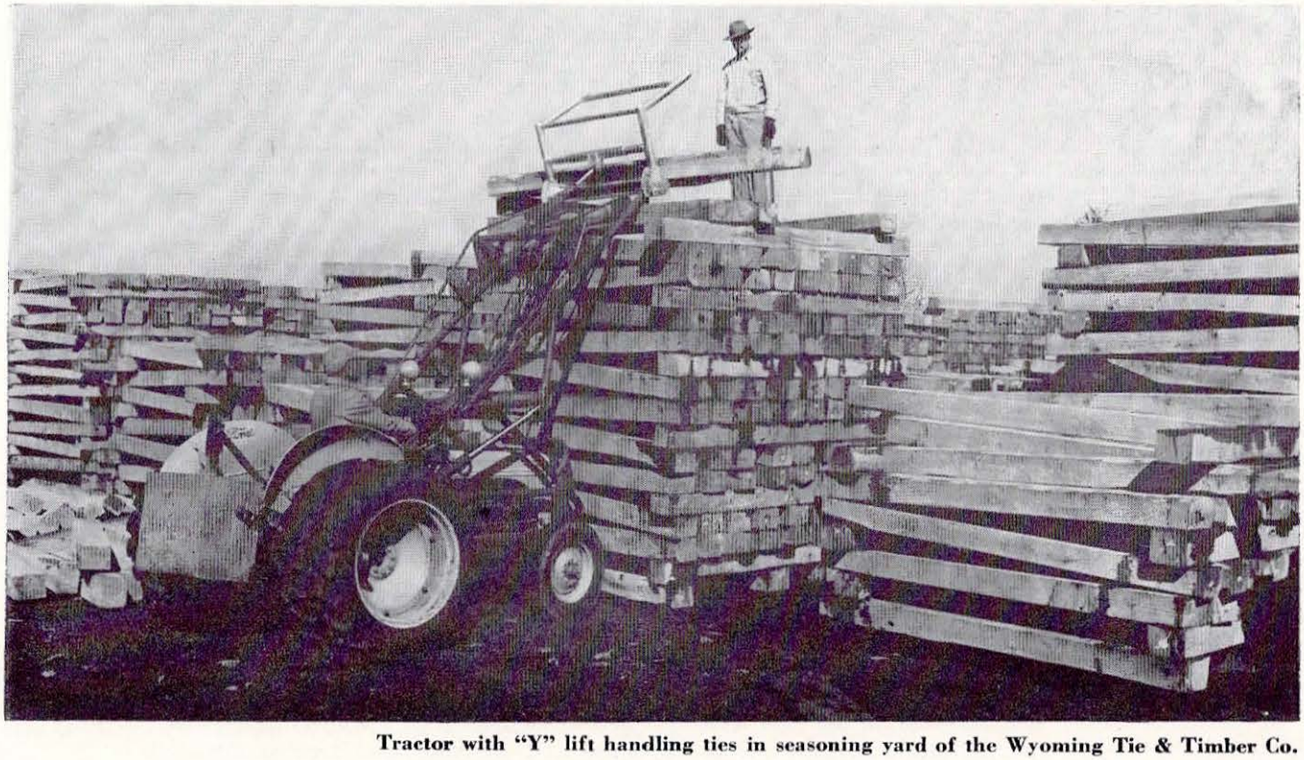
Mr. Frampton was somewhat more optimistic regarding the outlook for crosstie needs in 1953. His evaluation of the situation was based in part on the recent low level of tie renewals. He enumerated the conditions, including the effect of the steel strike, that had a depressing effect on tie renewals in 1952. He feels that the track work not accomplished in that year "must be taken care of at the earliest possible date and in addition to the normal 1953 track work." Providing that the country can go through 1953 without extensive industrial interruptions, Mr. Frampton felt "quite secure" in making the following predictions for the coming year:

(1) Crossties laid in all tracks during 1953 will total at least 38 million.

(2) Ties purchased during the 1952-53 tie year will exceed 33 million.

(3) Average purchase prices during the coming year will be between 6 per cent and 8 per cent above the 1952 average.

While dependable data is not available, Mr. Frampton believes "it is safe to say that most railroads enter this new tie year with sufficient ties to protect their 1953 needs with little or no surplus, and that there is no sur-



Tractor with "Y" lift handling ties in seasoning yard of the Wyoming Tie & Timber Co.

plus in the hands of the tie industry. This, if true, is a very healthy condition and further supports predictions made with regard to tie use and purchases."

In approaching the problem of estimating the requirements of the Class I railroads for crossties in 1953, Mr. Dick reviewed the trend of crosstie renewals in recent years, pointing out that the annual totals for the Class I railroads as a whole have been hitting successive new record lows for several years in spite of the fact that railroad revenues and earnings have been relatively good—at least compared with depression years. "But many track men will tell you that in spite of the low level of tie renewals in recent years, their tie condition is not unsatisfactory." At the same time he doubted that many track men will insist they are getting as much life from their ties as would be indicated by the present low level of renewals. From these facts he deduced that tie renewals, while they are being influenced to some extent by business conditions and other current factors, have in recent years been following a curve "that you might call the underlying tie-renewal cycle."

Many indications are, said Mr. Dick, that the trough of the current tie-renewal cycle has been reached. Support for this theory is contained in the estimated figures for renewals for 1952 and the prospects for 1953. While tie renewals this year were retarded by a number of factors, such as the steel strike, Mr. Dick estimated that the total renewals for the Class I railroads for 1952 will amount to about 30 million ties, an increase of approximately 1,300,000 ties as compared with 1951. Furthermore, on the basis of interviews with a number of railroad men, he expects that tie renewals on these railroads next year will be between 35 and 37 million. He pointed out, however, that these figures are predicated on maintenance of the status quo as regards business activity, the international situation, etc. Statements made to him by railroad men have also convinced Mr. Dick that, barring unfavorable developments, tie renewals will continue to show an uptrend for a number of years.

Reports Reasons for Tie Failure

Mr. Blair reviewed the results of a program started in 1950 on the Santa Fe to determine the types of failure causing crossties to be removed from the track. He reported the results for 1950 and 1951. For the purposes of this program five categories of failure were established, namely, decay, plate cutting, split, shatter, spike kill, broken, ring separation, and accident. During the two-year period a total of 404,010 ties were inspected, amounting to a 16-per cent scatter sampling of total tie renewals on the Santa Fe.

According to Mr. Blair, only 5 per cent of the ties inspected during the two years were removed from track because of decay, with 95 per cent being removed because of mechanical wear. "It is interesting to note," he said, "that more ties are removed as a result of train derailment than for decay." Of the Southern pine ties inspected, 98 per cent were removed because of mechanical wear, with 38 per cent of these being removed because of plate cutting. Owing to the importance of plate cutting as a factor in shortening tie life, the Santa Fe, said Mr. Blair, is concentrating on the use of hold-down fastenings and plastic compounds under tie plates as a means of minimizing this type of damage. In view of the fact that 17 per cent of the Southern pine ties were removed because of splitting, Mr. Blair said that the Santa Fe is experimentally doweling these ties.

Of the Western pine ties inspected, 4 per cent were removed because of decay and 6 per cent due to breakage, the latter, said Mr. Blair, being six times as high as for any other wood. Fourteen per cent of the oak ties were removed due to decay, and 67 per cent because of splitting. In an effort to reduce decay in these ties, experiments have been completed with a special pattern of incising teeth, "which shows that depths of penetration of treatment can be increased in those oak ties which are known not to accept enough mixture." A recent study indicates, said Mr. Blair, that Vapor Drying, with 12 per cent doweling, offers the best prospect as a solution to the splitting of oak ties.

"We think we are getting our problems defined," said Mr. Blair. "The factual data points to the solution of some of the problems, while the solution to some will be determined only by experimentation. The result will be increased tie life."

Mr. Kuehn advanced the interesting theory that "railroads may actually have an advantage by using ties of shorter life, that is, a larger number. To obtain longer life it is necessary to have costly protection. There is yet some doubt that the proposed additional protection will result in the hoped-for increase in life, but even if it is attained the cost may be too great and it will be better to use more ties."

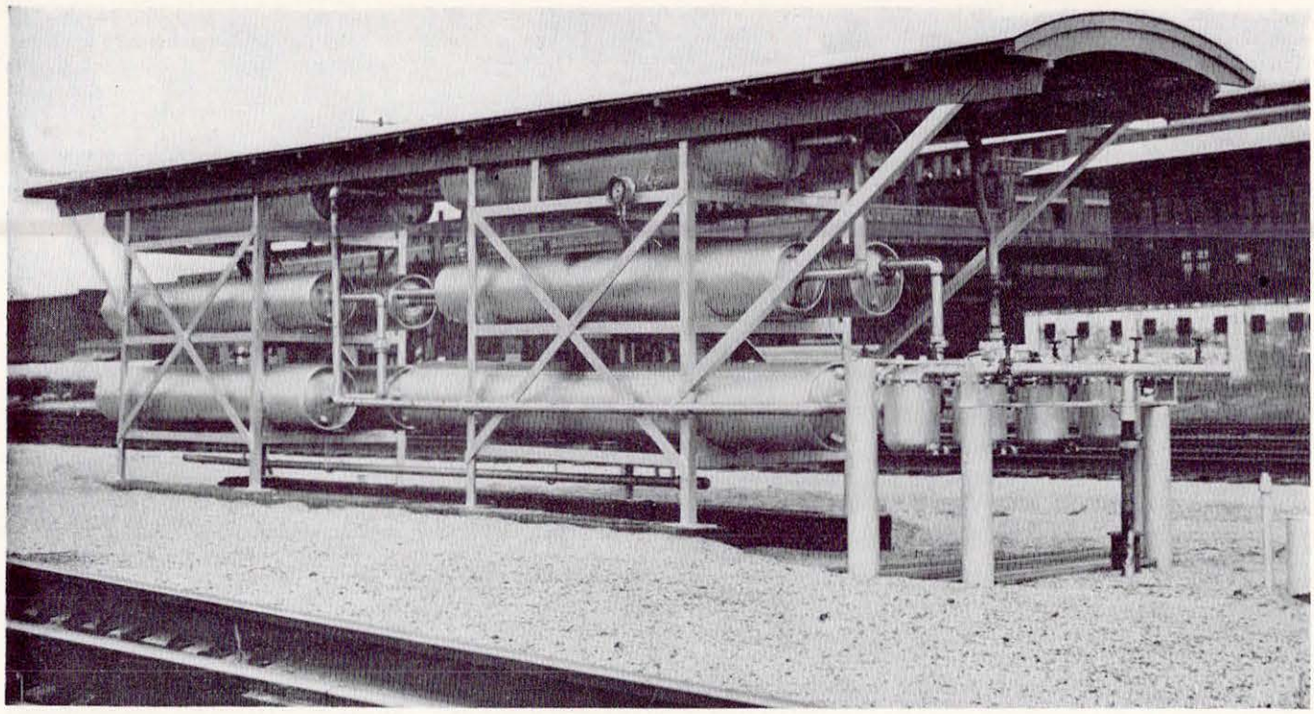
To illustrate his point, Mr. Kuehn presented a calculation based on straight line replacement charges, which, "might indicate that it may be no costlier to use four ties with nominal protection with no greater cost than three ties with full protection." Mr. Kuehn figures that the total cost of four ties in track, treated but with no special protection, would be $35. Assuming a 30-year life for these ties, he estimates that the cost per tie-year would be $0.292. On the other hand, he estimates that the cost of three ties fitted with special spikes, hold-down dowels, tie pads, anti-splitting devices, and coated with a top-surfacing compound, would be $36, giving a cost per tie-year of $0.30.

Treated Ties on B&O

In the absence of Mr. Harveson, his address was read by J. T. Andrews, special engineer of the B&O. The evolution of the track structure on the B&O, and its effect on the use of crossties, was traced in some detail. He related how the increasing cost of ties led the railroad to start treating them shortly after the turn of the century. From then on there was a progressive increase in the proportion of treated to untreated ties until by 1925 the use of untreated ties had been reduced to a very small proportion of the renewals.

"One of the factors affecting the use of treated ties," said Mr. Harveson, "was the belief that mechanical wear at such places as long grades and at points of heavy curvature limits the life expectancy of the ties and makes treatment uneconomical. At such points, the use of untreated oak ties was specified. It was not until the early 1920's that that theory was abandoned in favor of complete renewal with treated ties." However it was not until 1949 that the B&O finally realized the goal of having 100 per cent treated ties in track."

Noting that the membership of the American Short Line Railroad Association is made up of "standard gage, narrow gage and mortage lines," Mr. Hood presented figures showing the requirements of the short lines for crossties. Of the total number of ties used by all roads for maintenance in 1951 (30,460,795) the short lines applied 1,400,000, according to Mr. Hood. In addition, he said, the short lines applied 144,000 ties on new construction. Of the total number of ties used by these lines in 1951, 421,022 were untreated.



Typical trainline charging plant in outbound yard on the Frisco.

How Can Charging Air Reservoirs in Freight Trains Be Speeded?

With increasing need for more rapid movement of freight from shipping point to destination, the time lost in classification yards and terminals is receiving more attention and analysis. One matter under close examination is the time used in charging air reservoirs in long trains; this was discussed in a recent communication from G. L. Cotter, director of engineering of Westinghouse Air Brake Company.

Mr. Cotter said that air brake manufacturers recognize the importance of quick charging of trains and hold reservoir volumes to the minimum required for proper performance. Charging time becomes of increasing concern as train length increases. Because friction of the brake pipe is the controlling factor in train charging, the longer the brake pipe, the lower the rate of air flow. For example, an uncharged 150-car train, with system leakage well within recommended limits, requires 45 to 50 minutes for a full charge if all air is supplied from one end of the train. If the train is split in two parts and each part charged separately, the train charging time is reduced to about 20 minutes. If split into three parts, the charging time drops to about 10 minutes.

Many railroads employ charging plants in outbound yards in order to charge and inspect trains prior to attaching road power, and they have saved considerable time by charging at two or more points in the train. This is particularly true where many trains are dispatched hourly, but the practice has been found valuable at smaller terminals also, as cars can be charged and made ready for attachment to through trains with a minimum of delay.

The design and installation of a yard charging plant warrant careful consideration to obtain sufficient capacity and adequate moisture removal. The size and location of aftercoolers, storage reservoirs, and feeder pipes are all important, as are facilities for water collection and drainage. Mr. Cotter pointed out that two good papers on this subject, appearing in the proceedings of the Air Brake Association, will be helpful to everyone contemplating installation of a new yard plant.

The two papers referred to are: (1) in the 1950 Proceedings, by J. C. Nelson of the Chesapeake & Ohio, entitled, "Charging Long Freight Trains and Facilities Therefor," in which the author describes the Russell, Ky., yard-charging system and gives some information on the performance; and (2) the paper in the 1951 Proceedings, presented by the Pittsburgh Air Brake Club under the heading, "Removal of Moisture in Yard Charging Plants." This latter paper was prepared at the request of the Executive Committee of the Air Brake Association to amplify Mr. Nelson's paper. It gives considerable information on the theory of removal of moisture from compressed air, and includes a number of suggestions for the best arrangement of a yard plant.

SUPPLY TRADE

(Continued from page 18)

rection of **F. W. Bonacker,** general sales manager. Mr. Smith joined Carborundum in April 1948 and at the time of his recent appointment was manager, Central zone, of the merchandising sales division.

CAR SERVICE

I.C.C. Service Order No. 872, which maintains the permit system controlling movement of grain to terminal elevators, has been modified by Amendment No. 4, which set back the expiration date from October 31 until March 31, 1953.

I.C.C. Service Order No. 887 has been modified by Amendment No. 1, which set back the expiration date from October 31 until March 31, 1953. The order authorizes substitution of up to three SFRD, PFE, or WP refrigerator cars (not suitable for transporting perishables) in lieu of each box car ordered for shipments within the area embraced by the states of Oregon, California, Arizona and Nevada.

I.C.C. Service Order No. 888, which maintained minimum loading requirements for carload transfer freight, was supplanted by Revised Service Order No. 888, effective November 1. The revised order has the original order's minimum loading provisions, and also a further requirement stipulating that no railroad shall permit carload shipments in box cars to be "stopped off in transit to partially load" under tariff provisions authorizing the railroad (for operating convenience) to place a separate car at the stop-off point—unless the amount of freight at the point of origin, or stop-off point, or points, equals or exceeds 15,000 lb. for each car.

I.C.C. Service Order No. 891, which authorized use of SP stock cars, in lieu of box cars, for transporting fruit and vegetable containers and box shooks, was supp'anted by Revised Service Order No. 891, effective November 1. The revised order continues provisions of the original order, and adds cotton to commodities which may be transported in the stock cars.

FINANCIAL

Chicago, Burlington & Quincy. —*Acquisition.*— This road has asked the I.C.C. for authority to acquire all properties of its subsidiary, the Kansas City & Brookfield, and to dissolve the separate corporation. The KC&B was set up to construct a portion of the Burlington's cut-off route between Chicago and Kansas City. With the cut-off now completed, and operations under way (*Railway Age*, October 27, pages 7 and 17) the Burlington said it would be to its advantage to eliminate the separate company. The line of the KC&B extends from Tina Junction, Mo., to Missouri City Junction, 42.6 miles.

Chicago, Milwaukee, St. Paul & Pacific. — *Trackage Rights.* — The I.C.C. has approved this road's application for authority to acquire trackage rights over a line of the Chicago, Burlington & Quincy, the Winona Bridge Railway Company, and a connecting track of the Green Bay & Western. The Burlington line extends from Trevino, Wis., to East Winona, 36.3 miles; the Winona bridge line, 1.03 miles, includes a bridge across the Mississippi river between East Winona, Wis., and Winona, Minn.; and the GB&W connecting track (369 feet) is in Winona. The Milwaukee has used this trackage for more than a year. I.C.C. Service Order No. 877 authorized such usage after a 1951 flood destroyed the Wilwaukee's bridge across the Mississippi between Trevino, Wis., and Reads Landing, Minn.

While the new route is substantially longer, the Milwaukee will continue to serve points in Wisconsin formerly reached via its Trevino-Reads Landing bridge segment. The commission authorized the Milwaukee to abandon this segment, which, including the bridge, was 2.27 miles in length.

Savannah State Docks Railroad. —*Operation.*—This road, an organization created by the Georgia Ports Authority, has asked the I.C.C. for authority to operate as a switching line on GPA property near Savannah, Ga. The line would serve various facilities in the dock and warehouse area, connecting such facilities with the Atlantic Coast Line and Savannah & Atlanta. The switching line's trackage totals about 14.2 miles.

Valdosta Southern. — *Control.* — The National Container Corporation has applied to the I.C.C., for authority to acquire control of this road. The container corporation is building a large pulp mill at Clyattville, Ga., and the 27-mile VS will provide needed rail service. The corporation must obtain I.C.C. authority in this case because it already controls another railroad, the Marinette, Tomahawk & Western, in Wisconsin. Meanwhile, the VS has asked the I.C.C. for authority to issue 10,000 shares of $100 par common stock. Proceeds from sale of this stock would be used to consummate purchase of the rail line from the Georgia & Florida, as well as to rehabilitate the line and construct new interchange facilities at Valdosta, Ga. (*Railway Age*, October 6, page 131).

Table of Selected Income and Balance-Sheet Items of Class I Steam Railways for July and seven months of 1952 appears on page 77.

New Securities

Application has been filed with the I.C.C. by:

ST. LOUIS-SAN FRANCISCO.—To assume liability for $2,805,000 of series K equipment trust certificates, to finance in part 550 freight cars costing an estimated $3,512,769.

	Description and Builder	Estimated Unit Cost
250	50-ton box cars (Fullman-Standard Car Manufacturing Company)	$5,898
200	70-ton flat bottom gondola cars Pullman-Standard)	6,476
100	Steel woodrack cars (company shops)	7,430

The certificates, dated December 1, would mature in 15 annual installments of $187,000 each, beginning December 1, 1953. They would be sold by competitive bidding, with the interest rate to be set by such bids.

Division 4 of the I.C.C. has **authorized:**

CENTRAL OF GEORGIA.—To assume liability for $2,775,000 of series X equipment trust certificates, to finance in part 24 diesel locomotive units and 50 covered hopper cars costing an estimated $3,474,985 (*Railway Age*, October 13, page 171). Division 4 approved sale of the certificates for 99.6665 with interest at 3⅜ per cent—the bid of Salomon Bros. & Hutzler and three associates—which will make the average annual cost of the proceeds to the road approximately 3.46 per cent. The certificates, dated November 1, will mature in 15 annual installments of $185,000 each, beginning November 1, 1953. They were reoffered to the public at prices yielding from 2.45 to 3.45 per cent, according to maturity.

CHESAPEAKE WESTERN.—To issue notes totaling $125,000 to the First National Bank of Harrisonburg, Va., and/or the State Planters Bank & Trust Co. of Richmond, Va. The notes, secured by a mortgage on three diesel locomotives, will bear interest at 4½ per cent. Proceeds will be used to pay existing obligations and for working capital (*Railway Age*, October 13, page 171).

MAINE CENTRAL.—To issue and sell $1,500,000 of first mortgage divisional-lien 5 per cent bonds, proceeds from which will be used to refund first mortgage gold bonds of the Portland & Ogdensburg, due November 1, 1953 (*Railway Age*, October 13, page 171). The P&O is now a part of the MC, and its gold bonds are outstanding in the amount of $1,570,000. The new MC divisional-lien bonds, dated September 1, 1952, will mature September 1, 1977. The I.C.C. has exempted sale of the issue from usual competitive bidding requirements, and the road arranged to sell the bonds at 96.4 to a syndicate of seven dealers. The bonds were reoffered to the public at 100.

PECOS VALLEY SOUTHERN.—To issue to the First National Bank of Houston, Tex., a $100,000, five per cent note, proceeds from which will help finance rehabilitation of a 10-mile segment of the road (*Railway Age*, October 13, page 171).

TENNESSEE CENTRAL.—To assume liability for $980,000 of 4 per cent equipment trust notes, to finance 200 hopper cars costing an estimated $4,900 each (*Railway Age*, October 13, page 171). The Reconstruction Finance Corporation has agreed to purchase the notes at par. The notes, dated February 1, 1953, will mature in 30 semi-annual installments beginning August 1, 1953.

Security Price Averages

	Nov. 3	Prev. Week	Last Year
Average price of 20 representative railway stocks	62.49	61.81	53.19
Average price of 20 representative railway bonds	92.55	92.16	91.48

Dividends Declared

ALABAMA GREAT SOUTHERN.—$4, payable December 24 to holders of record December 4.

BANGOR & AROOSTOOK.—5% preferred, $1.25, quarterly, payable January 2, 1953, to holders of record December 5.

BESSEMER & LAKE ERIE.—$3 preferred, $1.50, semiannual, payable December 1 to holders of record November 15.

ELMIRA & WILLIAMSPORT.—$1.19, semiannual, payable November 3 to holders of record October 20.

GREAT NORTHERN.—non-cumulative preferred, $1, payable December 20 to holders of record November 20.

NASHVILLE, CHATTANOOGA & ST. LOUIS.—75¢, quarterly; extra, 25¢, both payable December 1 to holders of record November 10.

NORFOLK & WESTERN.—75¢, quarterly; extra, 50¢, both payable December 10 to holders of record November 7.

READING.—4% non-cumulative 1st preferred, 50¢, quarterly, payable December 11 to holders of record November 20.

RAILWAY OFFICERS

EXECUTIVE

Philip A. Hollar Becomes A.A.R. Vice-President

Philip A. Hollar, vice-president of the American Car & Foundry Co., has been elected vice-president—assistant to the president of the Association of American Railroads. Mr. Hollar, whose photograph appears on page 8, will begin his new duties December 1.

Mr. Hollar's election to the newly created position was announced October 31 by A.A.R. President William T. Faricy, following the regular monthly meeting of the A.A.R. board of directors.

The new A.A.R. vice-president has been vice-president of A.C.F. since 1946. In October 1950 he was loaned to the then newly created Defense Transport Administration, where he served as special assistant to Administrator James K. Knudson. Mr. Hollar was appointed Deputy Under Secretary of Commerce for Transportation in April 1951, and served for one year before returning to his position with A.C.F. Upon leaving the government, he was elected chairman of the Transportation Council, an advisory group set up by the Secretary of Commerce.

Mr. Hollar first entered railroad service in 1919 as a messenger-clerk on the Pennsylvania. He remained with that railroad until 1941, serving in turn as clerk, special apprentice, motive power inspector, coal agent, fuel purchasing agent and assistant stores manager. During World War II, from 1942 until 1945, Mr. Hollar was a special representative and assistant to the vice-president in the A.A.R. Operations and Maintenance Department.

Born in Altoona, Pa., in 1903, Mr. Hollar attended Altoona high school, the Carnegie Institute of Technology and Purdue University, where he earned a degree in mechanical engineering.

FINANCIAL, LEGAL & ACCOUNTING

C. S. MacKenzie, assistant general auditor of the SOUTHERN PACIFIC has been appointed to act as special representative and as income tax consultant. He is succeeded by **T. E. Walsh,** who has been appointed head tax accountant, in charge of corporate tax bureau.

Earl E. Eisenhart, Jr., assistant commerce counsel of the SOUTHERN, has been appointed commerce counsel, with headquarters remaining at Washington, D.C. **Henry J. Karison,** law assistant, also has been appointed commerce counsel, at Washington.

Appointment of **V. K. Boe** as general tax agent, and of **A. M. Grisvold** and **John A. Larson** as tax agents, has been announced by the SOO LINE.

Bert Cockburn, assistant cashier in the office of the local treasurer of the Prairie region of the CANADIAN PACIFIC at Winnipeg, has been appointed cashier, succeeding **J. H. Wood,** who has retired on pension after 40 years of service.

OPERATING

Albert E. Yarlott, general superintendent of dining car service of the NEW YORK CENTRAL at New York, retired on November 1. Mr. Yarlott was born at Kennesaw, Neb., on October 9, 1885, and has been associated with the NYC since 1906, when he joined

Albert E. Yarlott

the road as a steward at Chicago. Rising through the ranks, he became general superintendent of dining car service on January 16, 1946, after serving as superintendent at Boston during the war years. Mr. Yarlott is a past president of the Association of American Railroad Dining Car Officers.

James K. Moore has been named superintendent of the PITTSBURGH & OHIO VALLEY, a subsidiary of Pittsburgh Coke & Chemical Co., at Pittsburgh. Mr. Moore, who was formerly with the PITTSBURGH & LAKE ERIE, will be in charge of in-plant railroad traffic and operating personnel.

Kenneth V. Plummer, Jr., supervisor, perishable freight service of the WESTERN PACIFIC, has been appointed superintendent of perishable service, a newly created position.

C. I. Skillman, stationmaster of the CINCINNATI UNION TERMINAL, has retired after 50 years of service.

A. G. Bellew, agent of the CANADIAN PACIFIC EXPRESS COMPANY at Halifax, N.S., has been appointed assistant superintendent at St. John, N.B., succeeding **George S. Armstrong,** who has retired after 46 years of service.

Samuel Joseph Massey, Jr., terminal superintendent of the ILLINOIS CENTRAL at New Orleans, has been named general manager of the GRAND TRUNK WESTERN, a CANADIAN NATIONAL subsidiary, at Detroit, succeeding **A. C. McCarthy,** who is on leave of absence as a result of a long and serious illness.

George M. Slater has been appointed general superintendent of transportation of the RAILWAY EXPRESS AGENCY at New York. Mr. Slater, a native of Pittsburgh, began his career in the express business as a driver at Washington, Pa., in August 1934. After various assignments which included positions as assistant terminal agent at Pittsburgh (September 1942) and supervisor of transportation there (September 1944), he was appointed assistant general superintendent at New York on November 1, 1951.

TRAFFIC

Albert L. Postlethwaite, general foreign freight agent of the CENTRAL OF NEW JERSEY, has been appointed general freight agent in charge of sales and service, with headquarters as before at New York. **William D. Wakeman,** general western freight agent at Chicago, succeeds Mr. Postlethwaite as general foreign freight agent at New York. **Edward P. Seiwert,** general agent at Detroit, has been appointed general western freight agent at Chicago, to succeed Mr. Wakeman. The Detroit agency is being absorbed November 1 by the expanded Chicago agency, which will also serve the Detroit area.

E. Ralph Cross, foreign freight representative of the BALTIMORE & OHIO, has been appointed district freight agent, with headquarters as before at Washington, D.C., succeeding **Lawrence W. Brown,** who has been transferred to Huntington, W. Va.

Warren H. White, assistant general passenger agent of the NEW YORK CENTRAL at New York, has been appointed to the new position of general passenger agent — suburban. F. H. Baird, assistant vice-president, passenger traffic, in announcing the appointment, said: "Mr. White will devote his entire time to the commuter phases of railroad transportation. He will work closely with all communities in the suburban area and with commuter groups. Mr. White will study the effects of the population and industrial

changes of the past decade in the constantly expanding territory. He also will look into travel habits of commuters' families to determine means to improve service and patronage during off-peak hours. This way we believe the railroad and the commuters will get to know each other's problems more intimately. When problems do arise, we believe that solutions will be reached much more quickly through a streamlined procedure which will enable Mr. White to cross departmental lines to effect quick decisions. Mr. White will be primarily a field man—he will be out among the communities and mingling with commuters virtually all the time."

Mr. White was born at Quincy, Mass., 36 years ago and was graduated from Harvard College in 1937, the same year he joined the NYC's passenger department at New York. In 1940 he was promoted and transferred to St. Louis. Entering the Navy soon after Pearl Harbor, Mr. White served until 1946 in the Pacific and upon his discharge as a lieutenant commander rejoined the NYC at St. Louis as chief clerk in the passenger traffic department. He was promoted to general agent at Portland, Ore., in 1947 and in 1949 was transferred to Washington, D.C. He has been assistant general passenger agent at New York since January 1, 1951.

Raymond J. MacCarthy, general agent of the CHICAGO & NORTH WESTERN at Eau Claire, Wis., has been named general agent, freight department, at Minneapolis. **Leslie B. Olson** has been named general agent at Eau Claire to succeed Mr. MacCarthy.

William J. Seibert, general agent of the KANSAS CITY SOUTHERN at Cleveland, has retired. He is succeeded by **William H. McLaughlin,** district freight agent at New York, who in turn is succeeded by **A. L. Wilson,** commercial agent at New York.

Frank V. Martin, general agent of the CHICAGO, INDIANAPOLIS & LOUISVILLE's passenger department at Indianapolis, has retired after 40 years of service. **Charles Cohan,** district freight agent at Chicago, has also retired. He has been succeeded by **Leonard E. Eich.**

J. O. McCollum, divisi n passenger agent of the SOUTHERN at New York, has been promoted to general agent, passenger department, at Detroit succeeding **O. K. Rodewald. R. S. Tannehill,** traveling passenger agent at Cleveland, has been promoted to division passenger agent at New York, succeeding Mr. McCollum. **Willis T. Carpenter, Jr.,** has received his honorable discharge from the United States Army and has resumed service with the Southern as district freight agent at Chicago, succeeding **R. E. Toombs,** resigned.

J. L. McGhee, general agent of the NORFOLK SOUTHERN, has been promoted to assistant general freight agent—sales and service, with headquarters as before at Richmond, Va. **H. H. Jones,** division freight agent, has been promoted to assistant general freight agent—sales and service, with headquarters as before at New Bern, N.C.

E. R. Hopkins has been appointed assistant general eastern agent of the NASHVILLE, CHATTANOOGA & ST. LOUIS at New York, succeeding **H. E. Schler,** who has been granted temporary leave of absence.

MECHANICAL

William S. Funderburg, assistant roundhouse foreman of the ATLANTIC COAST LINE at Waycross, Ga., has been appointed general diesel supervisor at Wilmington, N.C.

Milton J. Mills, assistant superintendent of the CHESAPEAKE & OHIO car department, has retired from active service with the Pere Marquette district, after 47 years of service.

H. S. Mercer, who has been acting chief mechanical officer of the SEABOARD AIR LINE at Norfolk, Va., since April 1, has been appointed chief mechanical officer, succeeding **Richard W. Rogers,** who has been named general purchasing agent.

PURCHASES & STORES

M. Mainwaring, assistant purchasing agent of the CANADIAN PACIFIC at Toronto, has been transferred to Winnipeg, succeeding **E. O'N. Furlong,** who has been promoted to purchasing agent at Victoria, B. C., to replace the late **B. T. McDonough. L. A. Howe** has been appointed assistant purchasing agent at Toronto, succeeding Mr. Mainwaring.

Graham Lawson, supervisor of materials of the CANADIAN PACIFIC at Montreal, has been appointed district storekeeper at Calgary, Alta., succeeding **F. E. Crow,** who retired on pension on October 31, after 41 years of service.

Wellington A. Bamford, general storekeeper of the BANGOR & AROOSTOOK at Derby, Me., has been appointed acting purchasing agent, with headquarters at Bangor, Me., and Derby, relieving **Edwin W. Peterson,** who is on leave of absence on account of ill health.

Richard W. Rogers has been named general purchasing agent of the SEABOARD AIR LINE at Norfolk, Va., succeeding **W. G. Jones,** who retired on October 31, after 50 years of service. Mr. Rogers was born at Culloden, Ga., on December 4, 1887, and began his career with the SAL in 1908 as a clerk in the superintendent's office at Abbeville, S. C. He advanced steadily in various positions, including those of trainmaster and division superintendent, and in 1938 became assistant general manager of the road. In January 1947 he was appointed

Richard W. Rogers

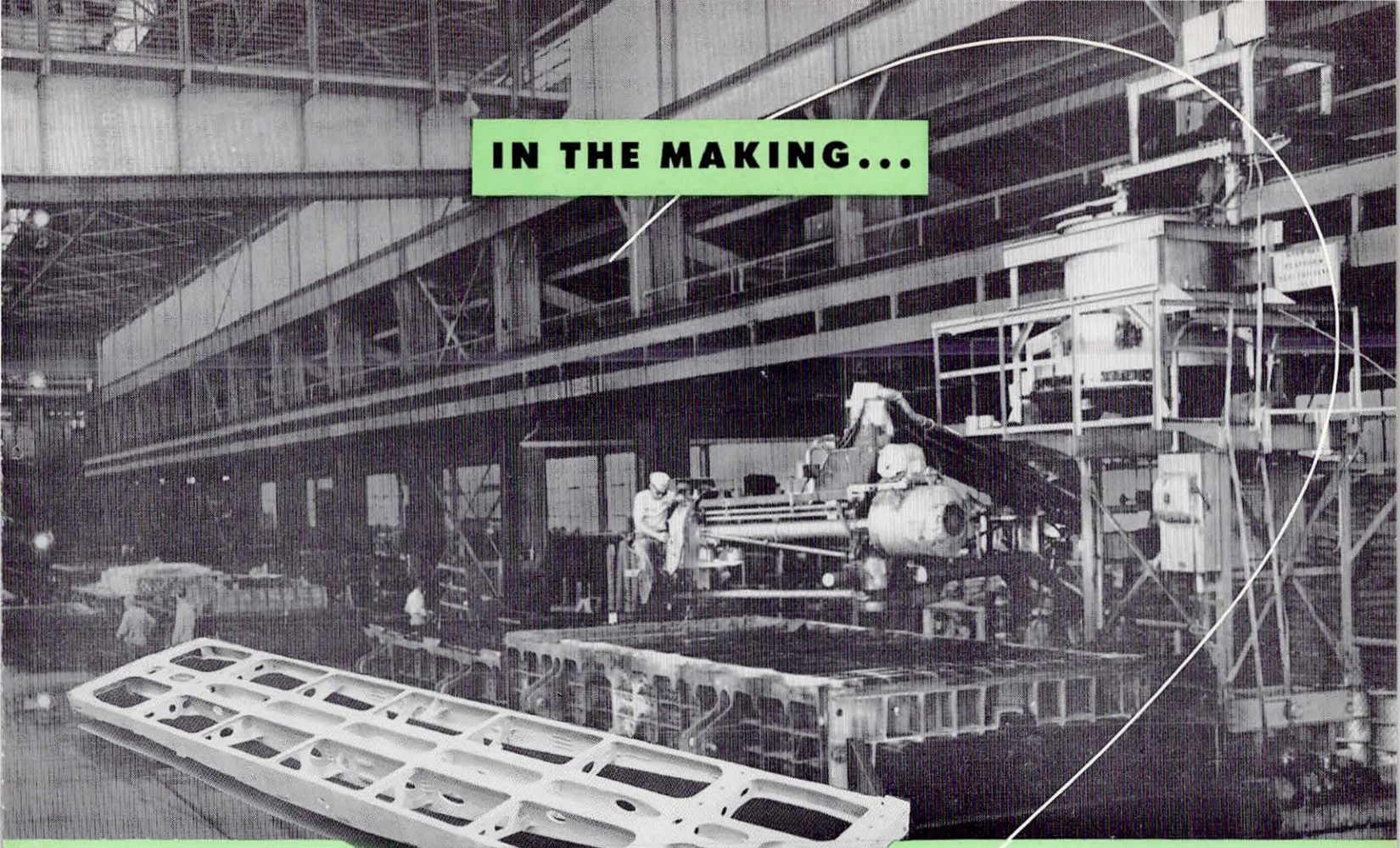
chief mechanical officer, which position he held until last April 1, when he was temporarily detached from his duties to go to Washington as director of the Railroad division of the National Production Authority.

OBITUARY

Albert Ward, 61, general attorney in the legal department of the PENNSYLVANIA, died at his home in Rosemont, Pa., after several weeks' illness.

Lester E. Kipp, joint publishing agent of the TRANS-CONTINENTAL FREIGHT BUREAU and the WESTERN TRUNK LINE COMMITTEE, died on October 26. Mr. Kipp had represented the Western Trunk Line Committee in numerous capacities for 27 years, and had served as joint publishing agent of the two bureaus since his appointment to that position in August 1933. Following World War I, when he served in France with the railway engineering corps, he was a traffic department officer with the Minneapolis & St. Louis until he came to Chicago in 1925.

John A. Moran, 62, assistant to president of the ST. LOUIS-SAN FRANCISCO at Memphis, died in the Frisco hospital at St. Louis on November 1, of a cerebral thrombosis. Mr. Moran was born at Springfield, Mo., on March 5, 1890, and entered railroad service in September 1907 as a telegrapher with the SL-SF at Osceola, Ark. After serving successively as cashier-telegrapher, agent, assistant superintendent, and superintendent of the River, Eastern, Northern and Southern divisions, he became assistant to president on August 1, 1947.



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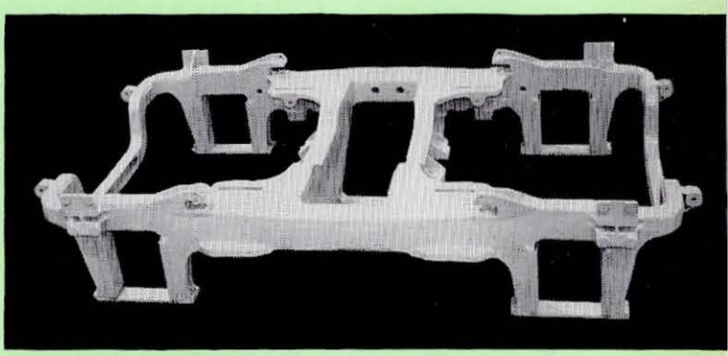
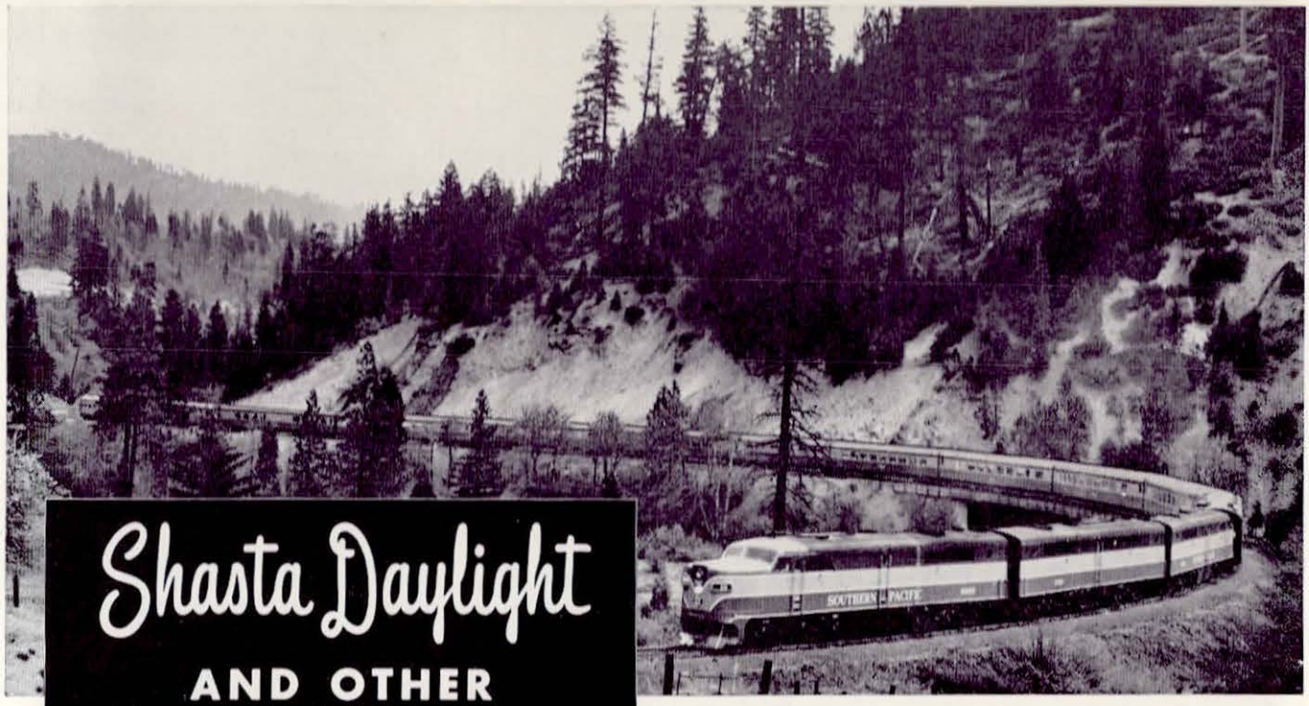


One-Piece Four-Wheel Motor Truck Frame
for Diesel Switching Locomotives

GENERAL STEEL CASTINGS
GRANITE CITY, ILL. EDDYSTONE, PA.



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ICE ENGINES and ENGINATORS*

●Southern Pacific today owns more than 500 Waukesha propane-powered air conditioning and Enginator* units. On every car of its famous name trains of today—the *Shasta Daylight*, the *Larks*, the San Francisco and Los Angeles *Daylights* and other luxury trains—the utmost comfort and complete convenience are assured for Southern Pacific passengers. Ever since 1936, Waukesha engine-driven equipment has supplied SP passenger trains with constant, dependable air conditioning and electric energy.

With a single unit for each car, Waukesha Diesel Enginators* supply *all* electric services—entirely independent of locomotive itself, train movement, car location, or terminal standby. Always 100 per cent available—any time! anywhere! any weather! Send for bulletins.

*Reg. U. S. Pat. Off.

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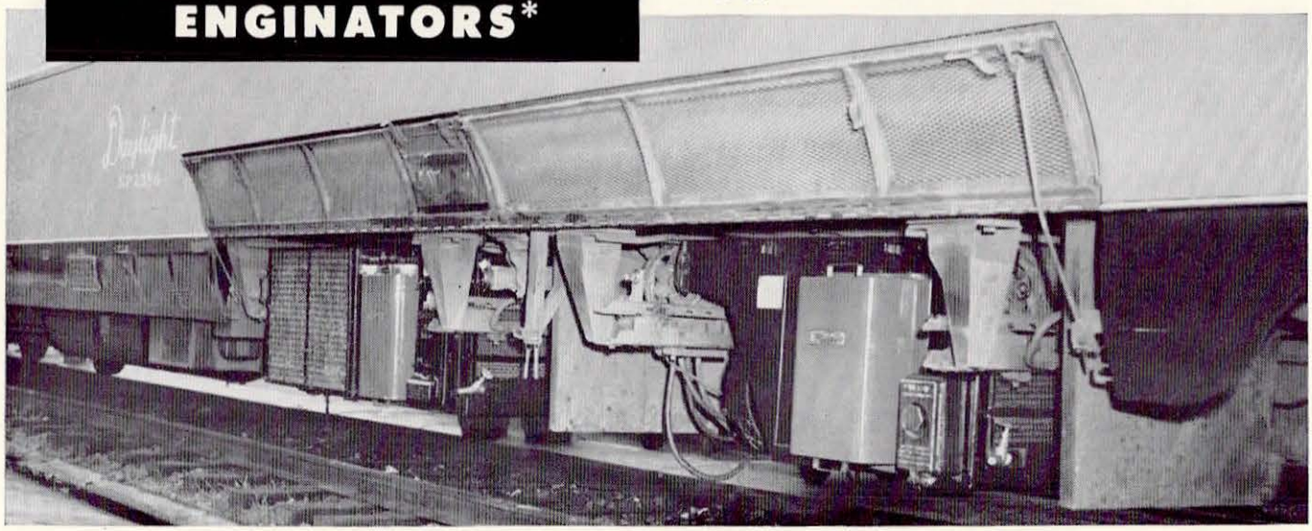

Southern Pacific *Daylight* under-car installation — Waukesha Enginator*, Ice Engine, and Sub-Cooler

(Continued from page 17)

Mr. Bortz reported that only 72 cases were awaiting board action as of the end of September, as compared with 321 when the board began its operations in October 1951. He also pointed out that, with the exception of the national railroad settlements, most cases related to wages and other compensation adjustments for groups or crafts of workers employed on individual rail or air carriers.

The board was created, pursuant to the 1951 amendments to the Defense Production Act, to provide for specialized handling of rail and air line wage cases under the stabilization program. It is a three-member board, Chairman Bortz's two colleagues being Francis A. O'Neill, who is also chairman of the National Mediation Board, and Walter T. Nolte of the Department of Justice.

September Employment

Railroad employment increased 1.18 per cent—from 1,219,257 to 1,233,638—between mid-August and mid-September, according to the Bureau of Transport Economics and Statistics, Interstate Commerce Commission. The mid-September total was 4.12 per cent below that of September 1951.

The index of employment, based on the 1935-1939 average as 100, was estimated at 118 for September, compared with 117 for August and 123.1 in September of last year.

September 1952 employment was below the August level in four of the seven employee groups. Transportation employees (yardmasters, switchtenders and hostlers) dropped 0.67 per cent, and the group embracing transportation employees (other than train, engine and yard) declined 0.45 per cent. Other decreases amounted to 0.15 per cent for executives, officials and staff assistants, and 0.01 per cent for professional, clerical and general employees.

Increased employment from August to September occurred in three groups. There was a 2.97 per cent increase in the maintenance of equipment and stores group, a 1.09 per cent increase in transportation employees (train and engine service), and 1.01 per cent in maintenance of way and structures.

As compared with September of last year, only the executives, officials and staff assistants group showed an increase. This group was up 0.93 per cent. Decreases ranged from 5.83 per cent for the maintenance of equipment and stores group to 1.36 for professional, clerical and general employees.

Selected Income and Balance-Sheet Items of Class I Steam Railways in the United States

Compiled from 127 reports (Form IBS) representing 131 steam railways

(Switching and Terminal Companies Not Included)

Income Items	United States For the month of July 1952	1951	For the seven months of 1952	1951
1. Net railway operating income	$60,963,230	$44,271,049	$503,043,403	$443,128,734
2. Other income	16,929,841	15,813,737	125,377,206	133,670,210
3. Total income	77,893,071	60,084,786	628,420,609	576,798,944
4. Miscellaneous deductions from income	3,279,816	4,085,926	27,929,275	33,213,263
5. Income available for fixed charges	74,613,255	55,998,860	600,491,334	543,585,681
6. Fixed charges:				
6–01. Rent for leased roads and equipment	9,492,726	8,521,190	71,647,844	65,507,660
6–02. Interest deductions[1]	26,191,077	25,150,698	181,336,828	174,192,966
6–03. Amortization of discount on funded debt	238,668	227,068	1,671,088	1,615,922
6–04. Total fixed charges	35,922,471	33,898,956	254,655,760	241,316,548
7. Income after fixed charges	38,690,784	22,099,904	345,835,574	302,269,133
8. Other deductions	3,221,611	3,323,224	20,660,059	21,876,387
9. Net income	35,469,173	18,776,680	325,175,515	280,392,746
10. Depreciation (Way and structures and Equipment)	40,706,896	40,059,181	278,552,679	269,388,978
11. Amortization of defense projects	.....	.....	.....	.....
12. Federal income taxes	26,117,063	20,059,577	292,604,274	274,675,575
13. Dividend appropriations:				
13–01. On common stock	7,629,617	5,024,107	120,856,310	112,954,272
13–02. On preferred stock	4,305,405	4,401,193	44,466,432	61,793,293
Ratio of income to fixed charges (Item 5 ÷6—04)	2.08	1.65	2.36	2.25

Selected Expenditure and Asset Items	United States Balance at end of July 1952	1951
17. Expenditures (gross) for additions and betterments—Road	$209,390,064	$182,740,017
18. Expenditures (gross) for additions and betterments—Equipment	594,442,901	567,960,722
19. Investments in stocks, bonds, etc., other than those of affiliated companies (Total, Account 707)	495,601,023	472,462,054
20. Other unadjusted debits	87,593,335	118,945,220
21. Cash	740,586,494	800,230,955
22. Temporary cash investments	870,891,138	879,616,957
23. Special deposits	72,906,457	129,427,511
24. Loans and bills receivable	878,078	1,843,110
25. Traffic and car-service balances—Dr.	67,762,340	58,752,146
26. Net balance receivable from agents and conductors	144,152,079	158,477,617
27. Miscellaneous accounts receivable	370,928,721	390,785,223
28. Materials and supplies	892,140,405	898,409,117
29. Interest and dividends receivable	14,065,967	12,344,043
30. Accrued accounts receivable	204,580,032	213,138,986
31. Other current assets	34,044,421	35,547,969
32. Total current assets (items 21 to 31)	3,412,936,132	3,578,573,634
Selected Liability Items		
40. Funded debt maturing within 6 months[2]	$232,065,341	$160,184,982
41. Loans and bills payable[3]	8,035,599	6,550,790
42. Traffic and car-service balances—Cr.	97,676,503	94,869,014
43. Audited accounts and wages payable	504,388,555	554,317,123
44. Miscellaneous accounts payable	201,916,955	254,045,545
45. Interest matured unpaid	24,425,023	23,857,707
46. Dividends matured unpaid	7,159,901	7,288,211
47. Unmatured interest accrued	72,822,317	70,912,496
48. Unmatured dividends declared	25,289,949	25,551,327
49. Accrued accounts payable	206,208,796	227,145,245
50. Taxes accrued	799,973,640	857,232,509
51. Other current liabilities	90,260,221	87,653,187
52. Total current liabilities (items 41 to 51)	2,038,157,459	2,209,423,154
53. Analysis of taxes accrued:		
53–01. U. S. Government taxes	600,248,338	670,054,833
53–02. Other than U. S. Government taxes	199,725,302	187,177,676
54. Other unadjusted credits	267,739,646	283,217,747

[1] Represents accruals, including the amount in default.
[2] Includes payments of principal of long-term debt (other than long-term debt in default) which becomes due within six months after close of month of report.
[3] Includes obligations which mature not more than one year after date of issue.
Compiled by the Bureau of Transport Economics and Statistics, Interstate Commerce Commission.
Subject to revision.

Railroad Fined

The Interstate Commerce Commission has received information that on October 6, in the U. S. District Court for the Western District of Louisiana, Guy A. Thompson, trustee, Missouri Pacific Railroad, entered a plea of guilty to a one count information charging the carrier with a violation of the commission's explosives regulations. The road was charged with transporting a car containing explosives next to an occupied caboose.

I.C.C. Acting Secretary George W. Laird made public this information in an October 24 memorandum for the press. The memorandum said the court imposed a fine of $100 on the carrier.

Waybill Studies

Additional waybill studies issued by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission include:

Statement No. 5241, Distribution of Petroleum Products by Petroleum Administration Districts (one per cent sample of waybills for all carload traffic terminated by Class I steam railways), First Quarter 1952.

Statement No. 5238, Territorial Distribution, Traffic and Revenue by Commodity Classes—Terminations in 1951.

Regional Transport Forum Planned by U.S. Chamber

Legislative proposals to be taken up with the next Congress by the transportation industry will be discussed at a regional transportation conference in Minneapolis, December 10-11. This regional meeting is the fourth in a series

(Continued on page 82)

Setting a new standard

for anti-wear performance

An advance in railroad diesel lubrication that rivals the discovery of anti-sludge compounds!

SHELL TALONA R OIL 40 combats the main causes of diesel engine wear so successfully that accepted wear standards must now be revised. *This gain is achieved without sacrifice of any basic lubricating function.*

Especially favorable is the wear reduction at the critical top-cylinder zone. By maintaining original cylinder-wall and piston-ring dimensions longer, engine efficiency stays at a high level and crankcase contamination is greatly reduced.

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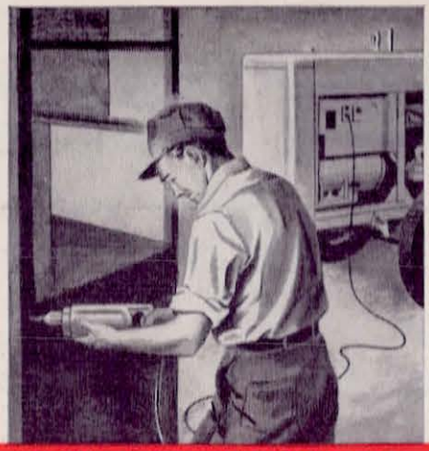
D-C FIELD WELDING



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TAKE IT ANYWHERE

Look what you can do with the New Westinghouse Engine-Driven D-C Welder

Here is a lightweight, 200-ampere, gas engine-driven welder with up to 3-kw stand-by power—all in the same unit. By simply plugging into convenient receptacles on the a-c power panel, the operator may obtain power for drills, grinders, pumps, lights and other electrical equipment.

LIGHT—The auxiliary generator power in this machine is gained at no penalty in weight. The 1,150 pounds represent the lightest possible engine-driven welder with stand-by power that you can buy today. The welder is rated at 200 amperes, full 60-percent duty cycle, NEMA rated, with a maximum of 250 amperes.

COMPACT—This self-contained unit is only 39½ inches from the base plane to the top of the lifting eye. Its over-all length is 62⅝ inches. The welding generator is self-excited and close coupled to the driving engine.

VERSATILE—This welder is valuable in construction and maintenance operations on gas and petroleum pipelines, road-building projects, railroads—in fact at any remote site where there is no access to ordinary power supply. In disaster areas, this welder can power vital electrical equipment until normal service has been restored. The standard unit is skid mounted for truck transport or may be mounted on a high-speed, pneumatic-tired trailer.

For more information contact your nearest Westinghouse representative, or write to the Westinghouse Electric Corporation, Welding Division, P. O. Box 868, Pittsburgh 30, Penna. Ask for Booklet B-5455. J-21710

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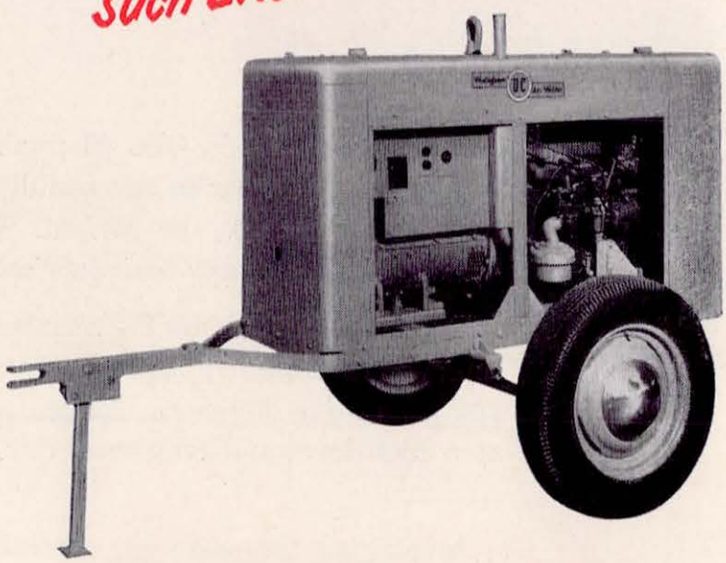

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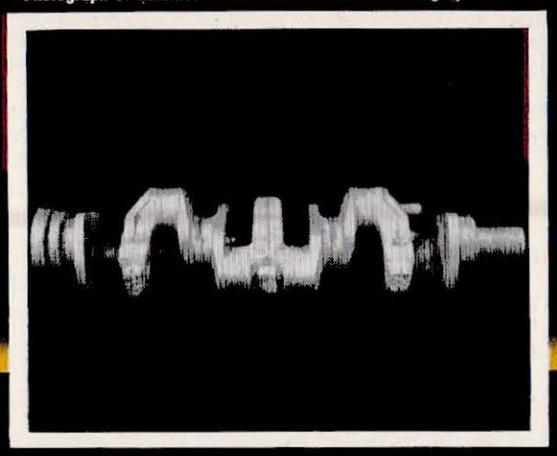
Westinghouse

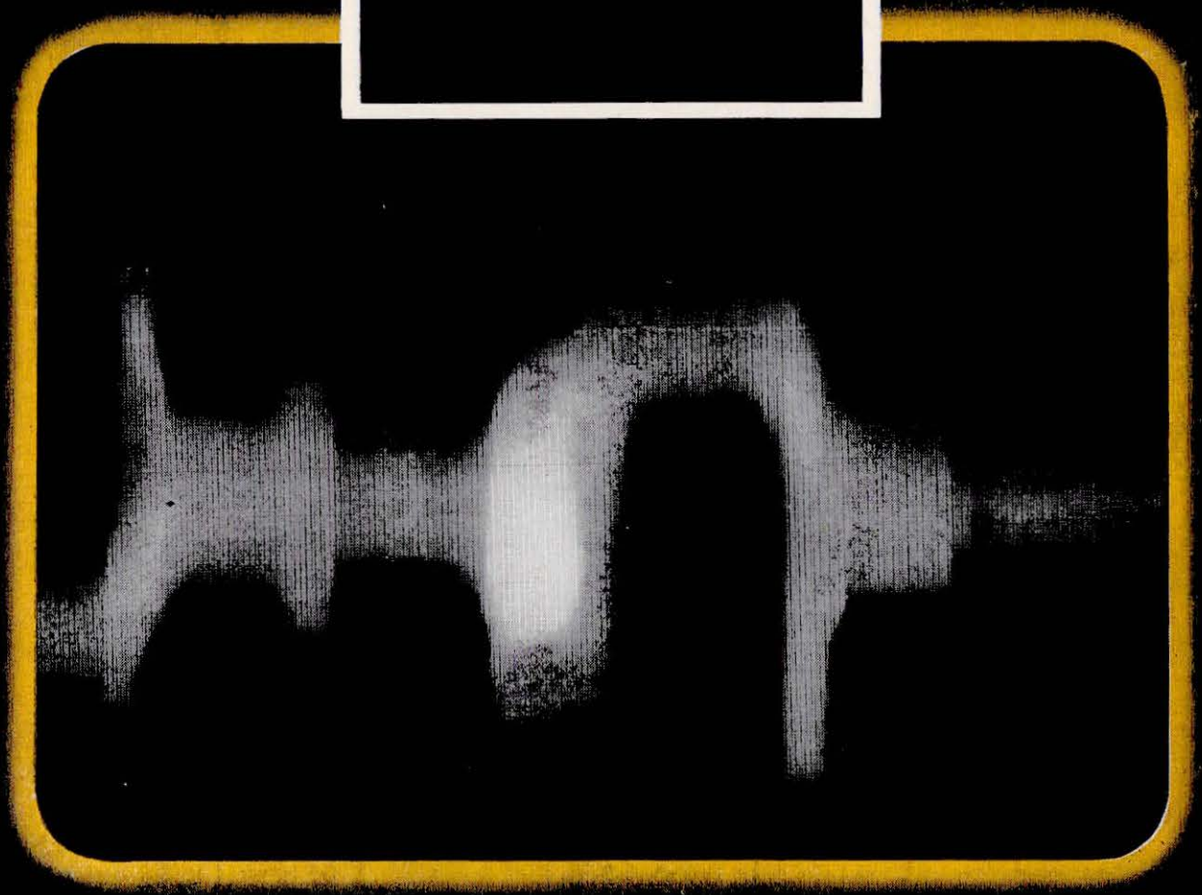
WELDING EQUIPMENT

Photograph of automotive crankshaft shown in radiograph below.



WILL IT STAND THE GAFF?

IS IT WORTH MACHINING TIME?



Radiography provides the answers

THERE'S a lot more at stake in a crankshaft than mere pounds of steel. Should it let go, the reputation of the foundry can go with it. Costly machining time can be wasted . . . and great inconvenience caused by a breakdown in service.

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Radiography...

another important function of photography

Kodak
TRADE-MARK

(*Continued from page 77*)

being sponsored by the Chamber of Commerce of the United States.

Shippers will debate the impact of federal aids on the transportation industry, and whether such aids can or should be eliminated. This discussion will also cover the problem of user charges. A panel of carrier representatives will discuss federal and state regulation of transportation. Recommendations of the shipper and carrier panels will be placed before the 83rd Congress, the chamber said.

Nine northwestern states will be represented at the Minneapolis conference. Earlier regional meetings sponsored by the chamber were held in Oklahoma City, Atlanta, and Cleveland.

Purpose of these conferences, the chamber said, is to provide open discussion of national transportation issues by regional carriers and shippers, and thus assist the chamber's Transportation Committee in proposing transport policies.

Air Transport Mobilizer Resigns; Air Fleet Set

Ray W. Ireland, administrator of the Defense Air Transportation Administration since last March, has resigned. He returns to his position as vice-president of United Air Lines. Secretary of Commerce Sawyer said no successor has been named to replace Mr. Ireland.

The D.A.T.A., an agency within the Department of Commerce, was established in 1951 to mobilize civil air transportation. During its first year, D.A.T.A. set up a reserve air fleet of 294 long-range civil aircraft which would immediately be made available for military use in event of war.

August Accidents

The Interstate Commerce Commission has made public its Bureau of Transport Economics and Statistics' preliminary summary of "steam railway" accidents for August, and for the first eight months of this year. The compilation, subject to revision, follows:

Item	Month of August		8 months ended with August	
	1952	1951	1952	1951
Number of train accidents*	907	996	6,533	7,273
Number of accidents resulting in casualties	44	57	356	363
Number of casualties in train, train-service and non-train accidents:				
Trespassers:				
Killed	111	146	681	769
Injured	111	126	659	690
Passengers on trains:				
(a) In train accidents*				
Killed	..	4	..	99
Injured	4	129	174	1,117
(b) In train-service-accidents				
Killed	2	1	8	11
Injured	159	164	1,194	1,185
Travelers not on trains:				
Killed	..	2	8	4
Injured	57	62	478	480
Employees on duty:				
Killed	21	39	230	249
Injured	1,647	2,083	13,245	15,407
All other nontrespassers:**				
Killed	94	106	969	1,036
Injured	366	425	3,432	3,792
Total — All classes of persons:				
Killed	228	298	1,896	2,168
Injured	2,344	2,989	19,182	22,671

* Train accidents (mostly collisions and derailments) are distinguished from train-service accidents by the fact that the former caused damage of $300 or more to railway property in 1951. Beginning January 1, 1952, this minimum was raised to $325. Only a minor part of the total accidents result in casualties to persons, as noted above.

** Casualties to "Other nontrespassers" happen chiefly at highway grade crossings. Total highway grade-crossing casualties for all classes of persons, including both trespassers and nontrespassers, were as follows:

Persons:				
Killed	71	97	859	932
Injured	223	276	2,240	2,546

D.P.A. Interprets Rules On Fast Write-Offs

The Defense Production Administration has announced an agreement with the Bureau of Internal Revenue on interpretation of regulations concerning variations in description or cost of facilities certified for rapid tax amortization.

D.P.A. regulations provide that a taxpayer may request an amended certificate of necessity when the description or cost of a facility varies

Your maintenance forces can apply this tough Mule-Hide

COLD PROCESS built-up roof

Application cost is low because your own maintenance crew can do the work without special tools.

A tough, weatherproof, built-up roof that outlasts old-fashioned hot-mopped roofs. Its long life reduces your maintenance costs. Proved in use on railroad buildings for over thirty years.

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MULE-HIDE ROOFS "NOT A KICK IN A MILLION FEET"

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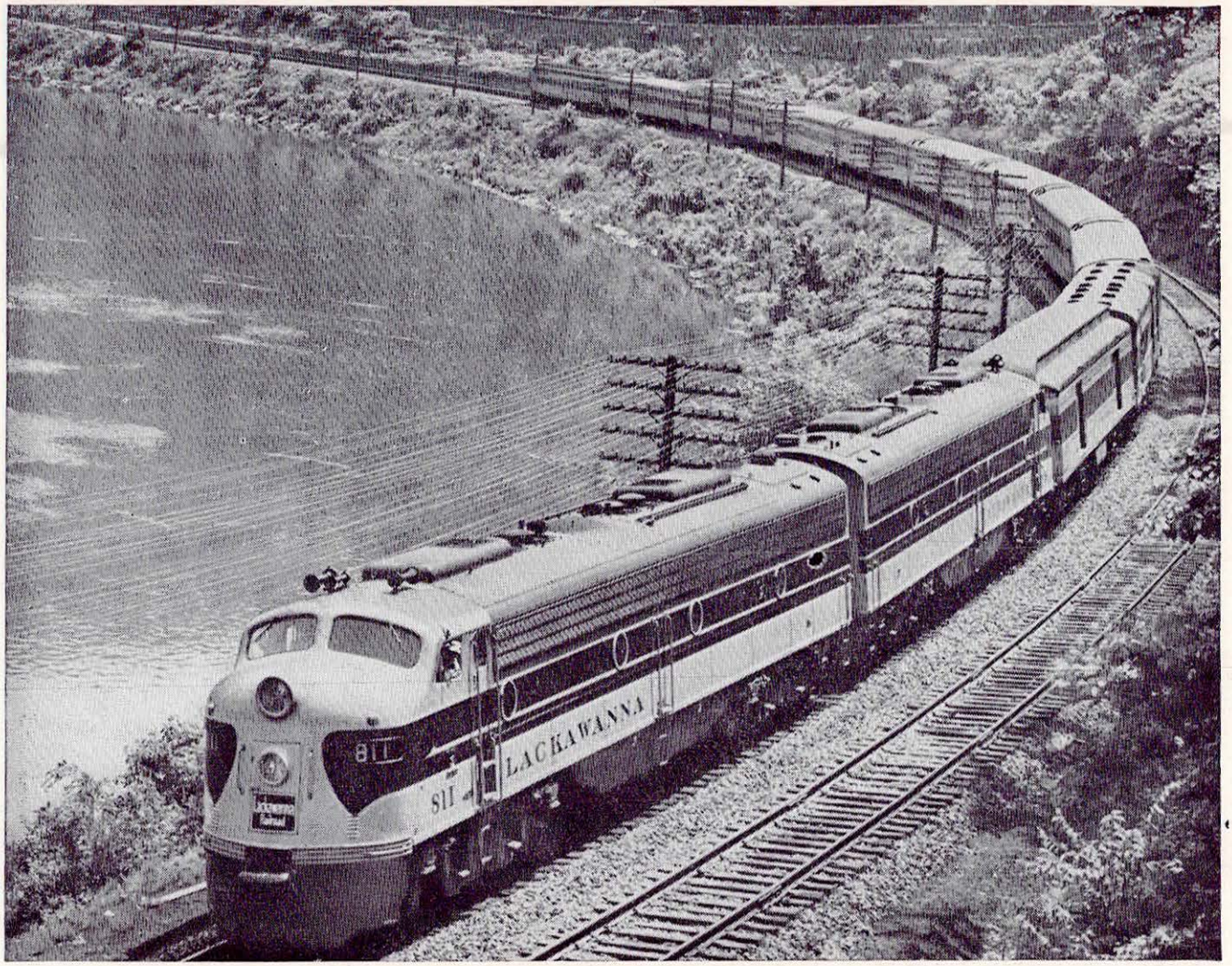

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SOLD IN: Maine, N. H., Vt., Mass., R. I., Conn., N. Y., N. J., Penna., Del., Md., D. C., Va., W. Va., N. C., S. C., Tenn., Ark., La.

ESSO STANDARD OIL COMPANY — Boston, Mass. — New York, N. Y. — Elizabeth, N. J. — Philadelphia, Pa. — Baltimore, Md. — Richmond, Va. — Charleston, W. Va. — Charlotte, N. C. — Columbia, S. C. Memphis, Tenn. — New Orleans, La.

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have been specifically developed to provide highly dependable gear lubrication for traction motor drives on electric and diesel-electric locomotives; gas electric and multiple-unit cars; and many other locomotive and car lubrication requirements. Esso COBLAX is available in a wide range from fluid oils to semi-solid products... "tailor-made" for railroad applications.

BACKED BY CONSTANT RESEARCH

— keeping pace with latest engine design and developments. Esso Railroad Products are constantly being tested and improved.

BACKED BY CONSTANT FOLLOW-UP

— on-the-job check ups by Esso Sales Engineers assure dependable performance of Esso Railroad fuels and lubricants! Be sure to call on ESSO for any fuel or lubricating problem.

so materially from the certification as to put in question the identity of the facility.

Interpretation of these regulations, as agreed upon by D.P.A. and internal revenue, provides that no amendment will be necessary if the varied description or cost is within the scope of the original certification to these extents:

"1. Where the facility acquired or constructed is the same as that certified even though the actual cost exceeds the cost of the facility as estimated in the certificate. Such increased cost may arise from increases in materials, labor, or from other factors.

"2. Where the facility acquired or constructed varies from the facility certified, but the actual cost exceeds by not more than 15 per cent the cost estimated in the certificate. The variations contemplated include increases in area, size or capacity; acquisitions from a manufacturer or construction by a builder other than the one set forth in the certificate; additional attachments or spare parts; or variations in construction."

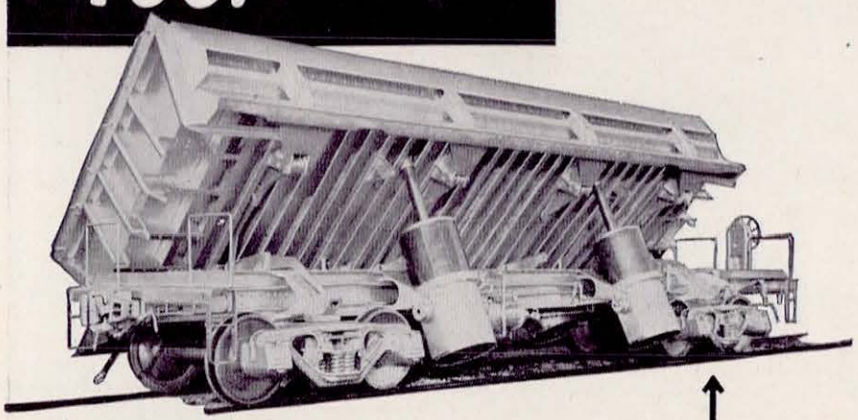
1950's Intrastate Rates Were Below Interstate Level

Intrastate freight rates, on which a substantial proportion of traffic moves, averaged only 91 per cent of the interstate level in 1950, according to a study made by the Bureau of Transport Economics and Statistics of the Interstate Commerce Commission. The study is Statement No. 5237, and it bears the usual disclaimer that it "has not been considered or adopted by" the I.C.C.

The 91 per cent figure is a country-wide average, the 1950 territorial ratios of intrastate to interstate rates having been these: official, 95 per cent; Southern, 81 per cent; Western Trunk Line, 92 per cent; Southwestern, 91 per cent; Mountain-Pacific, 84 per cent.

A foreword by Bureau Director W. H. S. Stevens said the study was prepared by R. T. Smith, with other members of the bureau's staff participating "directly or indirectly." It was undertaken, Dr. Stevens also said, "to determine the average revenue effects

BOOSTS EARNINGS TOO!



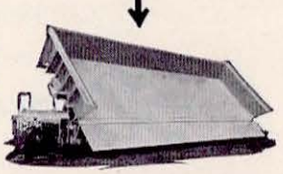
The Differential Air Dump Car has a way with operating expenses — cuts 'em down!

There's another pair of massive muscles on the other side of the car, too, means two-way dumping and greater flexibility.

They're built to take rough treatment — whether it's the slam-banging of the clam or the sudden dumping of tons of hot slag. These cars can take it and can come back faster for more.

Higher ratio of payload to dead weight! Fewer trips to the shop and shorter stays when they do go! Add all these up and it spells lower operating costs — another way to say "Boosted Earnings". Write for the full story on these cars.

DUMPS BOTH WAYS



Other Differential Products: Locomotives, Mine Cars, Mine Supply Cars, Rock Larries, Mantrip Cars, Dumping Devices and Complete Haulage Systems.

DIFFERENTIAL STEEL CAR COMPANY

FINDLAY, OHIO

SINCE 1915 — PIONEERS IN HAULAGE EQUIPMENT

Briefly . . .

. . . The Santa Fe is currently sponsoring in on-line daily papers a series of advertisements depicting advantages of travel under the Rail-Auto plan. The series supports, in Santa Fe territory, the nationwide ads of Hertz Driv-Ur-Self System, Inc., originators of the plan. The Santa Fe has also advertised the plan on its Chicago television program.

. . . The Lehigh Valley is installing cigarette vending machines in smoking cars on its New York-Buffalo "Black Diamond." Candy vending machines will be placed in adjoining non-smoking coaches. If the innovation is found satisfactory after a test period of 90 days, additional machines will be installed on other LV passenger trains.

. . . The Southern Pacific, for the second successive year, has won the national "Socrates Award" for outstanding transportation advertising, according to Transportation Ad Views, donor of the award. The competition, open to all North American transportation companies, is based on month-to-month judging of each carrier's newspaper advertising throughout the year. Special recognition was given this year to Claude E. Peterson, SP passenger traffic vice-president; F. Q. Treadway, general advertising manager, San Francisco; H. H. Gray, passenger traffic manager, Houston, Tex.; and their staffs; as well as the advertising agencies of Foote, Cone & Belding, and Laughlin, Wilson, Baxter & Persons.

. . . Latest road to swing over to use of book-type passenger tickets is the Denver & Rio Grande Western, which began using them on November 1. In announcing adoption of the dollar bill-size ticket, H. F. Eno, passenger traffic manager of the Rio Grande, said they will be used for all interline sales.

within the territories of . . . differences in rates, eliminating as far as possible the effects of different lengths of haul and consist of traffic." The comparison is limited to commodities and mileage blocks for which the bureau's waybill reports show both an interstate and an intrastate movement.

Estimated ratios were also given for 19 states—those "where the volume of comparable interstate and intrastate traffic was sufficient to make valid estimates by the method used," Dr. Stevens explained. The estimated state ratios range from 81 per cent for Alabama and California to 100 per cent for Ohio. Six of the 19 states have the median index of 90. Eight have indexes above that figure; five are below it.

OVERSEAS

Egypt.—The Egyptian State Railways reportedly are interested in purchasing up to 2,000,000 oak ties as well as an unspecified number of passenger coaches and diesel locomotives, according to Foreign Commerce Weekly. Former British standard specifications for ties, it is understood, have been revised to conform with U. S. standard specifications.

Further information is obtainable from Sayed Abdel Wahed, general manager of the railways, Cairo, Egypt.

Germany. — A communication and transport exhibition will be held in Munich next year from June 20 through October 11. The exhibition will cover rail and road transportation, navigation, aviation, forwarding agencies and other phases of communication and transport.

CONSTRUCTION

Canadian Pacific.—The maintenance shop to be built at Nelson, B. C., will cost an estimated $1,689,000 and is expected to be ready in time to accommodate the first of the 73 diesel units recently ordered *(Railway Age*, October 20, page 17). The shop, which it is said, will be the second largest of its kind in Canada, will measure 260 ft. by 100 ft. Made of steel and concrete with asbestos siding, it will be equipped with a 25-ton crane and a 5-ton crane.

Duluth, South Shore & Atlantic —Chicago & North Western.—The former has begun installation of automatic flashing-light signals at First, Second, Third, Main, Lake and Division streets, in Ishpeming, Mich., to protect grade crossings of tracks of the two companies. Estimated cost of the installation is $103,000, which will be borne equally by the two. In addition, the South Shore is making certain track relocations and installing a new concrete station platform at Ishpeming, at a cost of about $40,000.

Erie. — The board of directors recently approved a $7,700,000 budget for improvements in 1953. Contemplated improvements include purchase of various maintenance-of-way devices, engineering department equipment and intercommunication systems; replacement of culverts and repairs to bridges; installation of additional radio and Teletype equipment; resurfacing of certain station platforms and floors, and replacing jet air-conditioning equipment with electrical types in Pullman cars.

Louisiana & Arkansas—Texas & Pacific.—The L&A has applied to the I.C.C. for authority to construct and operate a 5.98-mile cut-off between Simmesport, La., and Lettsworth. At the same time the L&A and T&P asked for authority to change existing operating agreements in this area, as follows: The L&A to abandon one 6.5-mile segment, and abandon operation over 3.6 miles of T&P trackage; the T&P to abandon a 4.1-mile segment, abandon trackage rights over the 6.5-

(*Continued on page* 89)

MINK

WATER COOLERS and REFRIGERATORS for Diesel Locomotives Postal Cars Baggage Cars Cabooses, etc.

Low cost, economical to operate

"A COOLER DRINK BY MINK." Have it constantly available to train crews with low-cost Mink coolers. Non-mechanical and therefore more dependable, Mink coolers cost little to operate. Twenty pounds of ice (45 for Model 17) give more than 24 hours of efficient cooling under the most adverse conditions.

Solidly engineered and constructed, Mink coolers use stainless steel at every point where contamination might occur. Copper immersion coils give instant cooling and a constant supply of 40-50 degree water. Every part is quickly accessible for cleaning or sterilization.

Model 17, 8-gallon capacity with food compartment and utility drawer.

Model 15; 1, 2, 3 or 5 gallon capacity

Model 17 (right), approved by Railway Mail Service, has 8-gallon reservoir and 2000 cubic inch food compartment. Model 15 at lower left is a cooler only to hold a one, two, three or five gallon bottle. It is especially designed for diesel locomotives. Write for data sheets describing these and other Mink models in full detail.

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Safe . . . Low-Cost
Faster Way to Clean
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CABS

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WHEN you remove coatings of oil and grime from painted surfaces of Diesel engines, dials, controls and other equipment, you provide the CLEAN surfaces that expedite inspection and repair at terminals and maintenance shops by electrical forces. And that is why many leading roads specify OAKITE RENOVATOR for this work. It is safe to use, safe on painted surfaces. Can be applied with pressure spray. Or by hand. No rinsing! You merely wipe dry with cloth. A 4-page Bulletin gives further details. Write.

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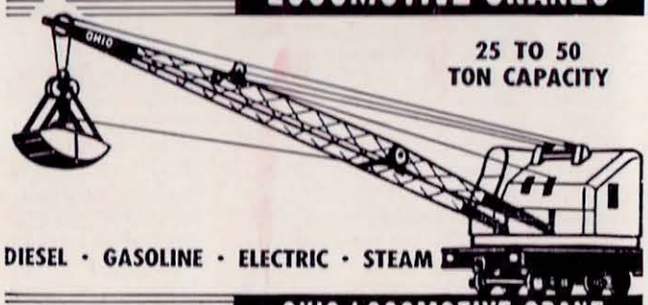
RAILWAY SERVICE DIVISION

OHIO
LOCOMOTIVE CRANES



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TON CAPACITY

DIESEL · GASOLINE · ELECTRIC · STEAM

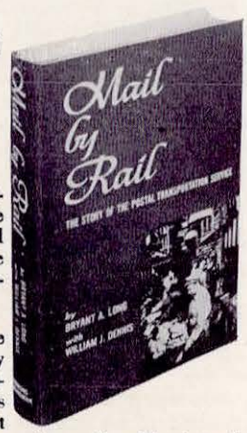
THE OHIO LOCOMOTIVE CRANE CO.
BUCYRUS, OHIO

RAILROAD FACTS

For transporting almost 16 and a half billion pieces of first class mail in 1951 the railroads received $3,536,546 less than the air mail carriers were paid for carrying slightly more than one billion letters and cards.

Ties 9-52

TAKES YOU INSIDE THE HEAD END'S "MYSTERY CAR"



MAIL BY RAIL tells you the little-known story of railroading in the mail cars . . . the lurching, colorful life of the railway mail clerk as he sorts your letters to intricate connections at mile-a-minute speeds!

You'll read of operations on the Santa Fe, the Pennsylvania and many others . . . even the old-time streetcar and interurban networks, as viewed from inside the Railway Post Office. You'll read of celebrated wrecks and robberies of famous mail trains, and a pack of the funniest railroad yarns you've ever laid your eyes on.

There are unusual railroad photos, nearly 30 of them, and lists of every railway mail run in America, Canada, and Britain. You'll even find a full chapter on British routes; another on Canada and other lands; a third on trolley and electric lines; and 13 others—written by mail clerks of the Postal Transportation Service. Order your copy now!
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Sloping-top, sectional-type diaphragm illustrated. Other types available to meet all conditions.

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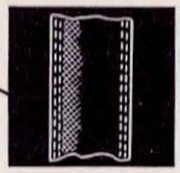
...HERE ARE RAILROADMEN'S REASONS WHY:

1. Famous Morton Sectional Construction—Top section has pockets five inches deep, into which legs fit. This exclusive design and construction give absolute protection against weather getting through into vestibule section.



2. Self-lubricating 3-ply Belting—Diaphragm belting is fully impregnated (in the fabric fibre, *not* just a surface treatment) with special solution developed by us over a period of 50 years of diaphragm manufacture. This preserves and increases the wearing qualities of the belting; provides self-lubrication against friction; insulates belting against acid fumes, and makes it highly resistant to damage by fire, water, mildew, rot and all weather conditions.

3. Top separate from Legs—Because the top section and legs are separate and independent, either section may be replaced separately without having to replace the complete diaphragm installation. This feature effects substantial savings.

4. Leg-ends bound—Extra wear and longer life are assured by a binding (of web belting or chrome leather, as specified) at the bottom of legs, where wear and friction are most severe.

Morton Vestibule Diaphragms are designed and constructed to give the utmost in wear, in dependability under the most rugged daily service in all weather—and in low maintenance costs. The sloping-top construction provides quick drainage and eliminates cinder accumulation . . . In *many* respects, "you're better off when you specify Morton!"

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(*Continued from page 85*)

mile line of the L&A, and acquire new trackage rights over the 5.98-mile cut-off. Effect of these changes, the roads told the commission, will be to reduce main line mileage between Shreveport, La., and New Orleans. In addition, "numerous onerous operating conditions" will be eliminated.

Pittsburgh, Ohio Valley & Cincinnati (Pennsylvania).—This road has asked the I.C.C. for authority to construct and operate an 8-mile spur in Belmont county, Ohio. The proposed line, to be known as the Powhatan Spur, would serve a coal mine of the David Z. Norton Company. This mine has an estimated reserve of 30,000,000 tons of bituminous coal. Funds for constructing the rail segment would be supplied by the Pennsylvania.

Terminal Association of St. Louis — Madison, Illinois & St. Louis.—The I.C.C. has dismissed without prejudice the application in which these roads sought authority to construct 6,276 feet of trackage near Granite City, Ill. (*Railway Age*, June 9, page 72). The roads indicated the application may be filed again later, and explained the present application was "premature." Meanwhile, the commission also dismissed an Illinois Terminal application for permission to construct a 2.3-mile line at Granite City (*Railway Age*, July 21, page 66). These various rail lines were designed to serve dock facilities of the Bi-State Development Agency.

ABANDONMENTS

Division 4 of the I.C.C. has **authorized:**

DENVER & RIO GRANDE WESTERN.—To abandon branch line segments totaling approximately 19.7 miles. One line, 10.3 miles, extends from a point near Ridgeway, Colo., to Ouray; a second line, 9.5 miles, extends from Montrose to Cedar Creek. Division 4 said there is no prospect of future needs which would warrant operation of these segments. Meanwhile, the D&RGW plans to convert its narrow-gage tracks between Montrose and Ridgeway into standard-gage.

PACIFIC ELECTRIC.—To abandon portions of its Los Angeles-Van Nuys, Cal., line, totaling approximately 11.3 miles. The road also will abandon operation over a 1.8-mile segment of the Southern Pacific. Motor coach service will be substituted for present rail service. The rail lines will be removed to make way for a highway construction program in the area. Division 4 took no action on the road's pending request for authority to abandon a 3-mile segment of its Los Angeles-West Hollywood line. (*Railway Age*, May 12, page 79).

Application has been filed with the I.C.C. by:

LEHIGH VALLEY.—To abandon its Pottsville branch, approximately 35 miles, from Lizard Creek Junction, Pa., to Westwood Junction; to abandon its Schuylkill Haven branch, 0.5 mile, and to discontinue trackage rights over a segment of the Reading at Pottsville. The Schuylkill Haven branch connects the Pottsville branch with the Pennsylvania. These lines serve a rural area which does not have sufficient business to justify continued operation, the road said.

TAMA & TOLEDO.—To abandon its entire line, 4.1 miles, from Toledo, Iowa, to Tama. The company also seeks authority to abandon its motor carrier service between the two towns.

This particular machine is the new 4-speed Strandflex. No belts are used—a patented gear-drive assembly mounted on the motor permits quick, easy, positive speed change. Entire motor-drive unit, including even the starting switch, is completely enclosed to seal out dirt, dust and grit—and give you many *extra* years of trouble-free service.

The STRAND line of flexible-shaft tools – manufactured by the N. A. Strand Division of the Balmar Corporation, a wholly-owned Franklin subsidiary – includes, also, belt machines up to 3 hp. It provides a selection of portable, easily controlled, light-working-weight tools which can be used in tight places, on the bench or floor, for—*grinding—polishing—buffing – wire brushing – rotary filing – sanding—nut setting—screw driving.*

Each of our offices has STRAND equipment available for demonstration at any time you suggest. If this is not practical, won't you write for one or more of the following:

Remember—with STRAND the operator lifts the tool only – not the heavy motor.

Catalogue #31—Single-speed and three-speed countershaft types—⅓ to 3 hp
Bulletin #43 — Four-speed "Strandflex" gear type — ¼ to ½ hp
Bulletin #47 — Rotary files and cutters
Bulletin #48 — Wire brushes
Bulletin #49 — Abrasive and grinding attachments
Bulletin #50 — Buffing and rubbing attachments

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Current Publications

PERIODICAL ARTICLES

Crowded Free Roads Result in . . . Jumbled Network of Toll Roads. Business Week, September 13, 1952, pp. 82-90. McGraw-Hill Publishing Company, 330 W. 42nd st., New York 36. Single copies, 25 cents.

Toll turnpikes have grown up to answer demands the highway people couldn't fill. How far will they go?

When the Railroads are Dieselized What's Ahead for E.-M.D.? by Wallace W. Abbey. Trains & Travel, October 1952, pp. 23-30. Kalmbach Publishing Company, 1027 N. 7th st., Milwaukee 3, Wis. Single copies, 50 cents.

With the saturation point of dieselization in sight, Mr. Abbey explains why the Electro-Motive Division of General Motors has not produced itself right out of business. It will be several years before new locomotive production will taper off and E.-M.D. is getting an increasing share of overseas business. There is parts business and factory rebuild of locomotives, and the possibility of converting diesel locomotives to gas-turbine locomotives, as well as building new turbine-powered units. Mr. Abbey explains at length the parts production operations at E.-M.D., and what it is doing in the way of rebuilding and modernizing locomotives. The article also includes a cutaway drawing explaining how a diesel works.

BOOKS

Railway Commercial Practice, by H. F. Sanderson, Volume One, General and Passenger. 257 pages, illustrations, maps. Chapman & Hall, Ltd., 37 Essex st., London, W.C. 2, England. 25 shillings.

Mr. Sanderson's object in writing this book was to provide a permanent record of the course of instruction in the more advanced aspects of railway commercial work which he developed over a period of four years as principal of the former London & North Eastern's all line commercial school at Faverdale Hall, Darlington. It covers such subjects as railway education, legislation, organization, public relations, passenger service, equipment and fares, office methods, staff problems and industrial location. A second volume will cover freight service.

The Railroads of the Confederacy, by Robert C. Black, III. 360 pages, illustrations, maps. University of North Carolina Press, Chapel Hill, N. C. $6.

Never before has the story of the first use of railroads on a major scale in a major war been told so fully and so fascinatingly. It is a complex and dramatic story, with the railroads themselves playing the part of the tragic hero—at first vigorous though immature; then overloaded, driven unmercifully, smashed, put together again, starved for iron, wearing out, slowing down, struggling on to inevitable destruction in the wake of Sherman's army carrying the Confederacy down with them. The first complete map of all the Confederate railroads has been drawn for this book, and, in addition, numerous smaller maps help the reader follow the course of the railroads through Dixie.

The Northern Railroads in the Civil War, 1861-1865, by Thomas Weber. 318 pages. King's Crown Press, Columbia University, 2960 Broadway, New York 27. $4.

This book is not an attempt to write a general history of railroad transportation during the Civil War. Rather, it tries to establish a relationship between the railroads and the war, to note how the war affected railroad activities, and how, in turn, railroad experience affected the events of the war. Chapters cover northern railroads at the outbreak of the Civil War; railroad expansion during the war; emergency problems in 1861; effect of the war upon railroad business; the movement for regulatory legislation; the New York-Washington artery: bone of contention; government achievements in regulation; and United States military railroads. In a concluding chapter, the war and the railroads, the author lists railroad contributions to the science of war, and war contributions to the science of railroading.

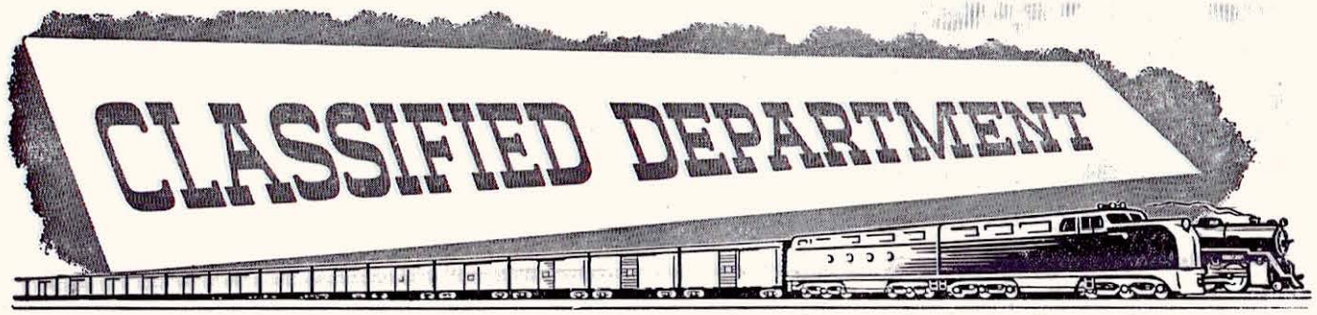
PAMPHLETS

Standards for the Maintenance and Safe Operation of Industrial Trucks. Pamphlet No. 505B, C, National Fire Protection Association, 60 Batterymarch st., Boston 10, Mass.

Industry, says the announcement of this pamphlet, has welcomed industrial trucks —fork trucks, straddle trucks, powered hand trucks and the like—as one answer to its manpower problem. But careless use of the trucks, the announcement continues, has resulted in "far too many costly fires and even fatal accidents"; "industry is seriously concerned over their potential danger." This pamphlet, drawn up under direction of the N.F.P.A.'s Committee on Industrial Tractors and Lift Trucks, follows the association maxim that "potential danger becomes potential safety through careful application of fire protection techniques." It contains "a set of reasonable recommendations for operating and maintaining industrial tractors and trucks." Tentative Standards 505 and 505A, covering truck design and types of trucks suitable for use in various locations, are still under consideration by committee members.

Annual Bulletin of Transport Statistics, 1950. 76 pages. Prepared by the Transport Division, Economic Commission for Europe. A United Nations publication available from Columbia University Press, International Documents Service, 2960 Broadway, New York 27. 70 cents.

This bulletin reviews the transport situation in Europe in 1950. An account is given of trends of passenger and freight traffic in inland transport, and a comparison is made between volume of traffic by railway and inland waterway in 1949 and 1950, and volume of production and imports during those years. Data are provided in the form of statistical tables and charts on the network of railways, roads and inland waterways, on mobile equipment and on utilization of transport equipment. Statistics are included for the 17 countries.



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Every kind of steel is in stock for quick shipment though many sizes are often missing due to the heavy demand. Joseph T. Ryerson & Son, Inc., Plants: Chicago, Milwaukee, St. Louis, Cincinnati, Detroit, Cleveland, Buffalo, Boston, Philadelphia, Jersey City, Pittsburgh, Los Angeles, San Francisco, Seattle, Spokane

BARS—carbon & alloy, hot rolled & cold finished
STRUCTURALS—channels, angles, beams, etc.
PLATES—sheared & U. M., Inland 4-Way Floor Plate
SHEETS—hot & cold rolled, many types and coatings
TUBING—boiler & mechanical, seamless & welded
STAINLESS—Allegheny plates, sheets, bars, tubes

There's a "DEEP-FLANGE" ALCOLID® TOO

for lifetime service

Railroads with extensive right-of-way through desert country, or where extreme winter conditions prevail, recognize the "Deep-Flange" ALCOLID as the answer to their journal box lid problems.

Like the regular ALCOLID, the "Deep-Flange" model is designed for a lifetime of service. The fully articulated cover is held firmly in place by a sturdy torsional spring. The square-headed retaining pin is locked in place by a flanged hood ear. Thus, there is *no pin rotation or eye elongation*. Installation is quick and easy.

Send for complete details on the "Deep-Flange" ALCOLID to your Alco sales representative in New York, Richmond, Cleveland, Chicago, St. Louis, St. Paul, San Francisco.

ALCOLID

RAILWAY STEEL-SPRING DIVISION

AMERICAN LOCOMOTIVE COMPANY

NO ATTENTION NEEDED BETWEEN WHEEL-TURNINGS WITH GREASE-LUBRICATED TIMKEN® BEARINGS!

OPERATING tests on passenger cars in regular service prove it! Grease-lubricated Timken® bearings on passenger cars and diesels can safely go from one wheel-turning to the next without attention —without additional lubricant!

Four leading railroads have already switched from oil to grease for their Timken bearing equipped passenger cars. One of these railroads ran grease-lubricated Timken bearings over 200,000 miles without adding lubricant. Another dozen railroads are also coming up with favorable results in their wheel-turning to wheel-turning tests of grease-lubricated Timken bearings.

The switch from oil to grease for Timken bearings means new operating economies to the railroads. They're eliminating the man-hours previously spent to check and add lubricant. They're making savings on the lubricant itself.

Timken bearings can be converted from oil to grease lubrication without modifying the bearings . . . and without buying extra journal parts. And they're the *only* railroad journal bearings which can consistently go a full wheel-turning period on AAR-approved grease without additional lubricant!

Find out for yourself how you can get the cost-saving advantages of grease-lubricated Timken bearings. Write The Timken Roller Bearing Company, Canton 6, Ohio. Canadian plant: St. Thomas, Ont. Cable address: "TIMROSCO".

TIMKEN
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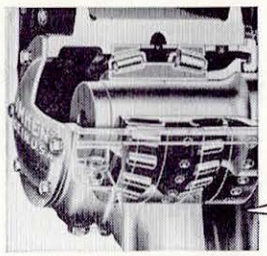

GREASE ME AT ONE WHEEL-TURNING ...FORGET ME 'TIL THE NEXT!

NOT JUST A BALL ○ NOT JUST A ROLLER ▭ THE TIMKEN TAPERED ROLLER ▭ BEARING TAKES RADIAL ⊙ AND THRUST →⊙← LOADS OR ANY COMBINATION ✳